

**Criteria and Predictors of  
Missionary Cross-Cultural Competence  
in Selected North American  
Evangelical Missions**

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**I hereby declare that I explored the literature pertinent to this subject, researched for, wrote, pre-tested, and revised new questionnaires, statistically analyzed all data, and wrote this thesis in its entirety.**

**All quotations and sources (including previously tested and proven field instruments) have been identified and acknowledged. All biblical quotations are from the New International Version.**

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**John G. Kayser**



**To the finest missionaries I have known  
Gus and Lois Kayser  
and  
Stanley and Gladys Hanson**

*"Not that we are competent in ourselves to claim anything for ourselves,  
but our competence comes from God.  
He has made us competent as ministers of the new covenant--  
not of the letter but of the Spirit; for...the Spirit gives life."  
II Corinthians 3: 5, 6*

**AND**

**To my loving and beautiful wife, Marilyn,  
and my wonderful daughters, Kathy, Kristine, and Karyl  
for their uncomplaining and consistent support.  
I love each one of you!**

*"Your wife will be like a fruitful vine within your house;  
your [daughters] will be like olive shoots around your table.  
Thus is the man blessed who fears the Lord."  
Psalm 128: 3, 4*

**AND**

**To my eldest daughter Karen  
who was called "Home" at age 14 on May 21, 1990  
during the research and writing for this thesis.  
What precious memories I have of you!**

*"Death has been swallowed up in victory!"  
I Corinthians 15: 54, 55*

**"Glory to God, in full anthems of joy;  
The being He gave us, death cannot destroy.  
Sad were the life we must part with tomorrow,  
If tears were our birthright, and death were our end;  
But Jesus hath cheered the dark valley of sorrow,  
And bade us, immortal, to heaven ascend.  
Lift then, your voices in triumph on high,  
For Jesus hath risen, and [redeemed] man shall not die."  
Henry Ware, 1794-1843**

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**CRITERIA AND PREDICTORS OF MISSIONARY CROSS-CULTURAL  
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## **ABSTRACT**

### **Criteria and Predictors of Missionary Cross-Cultural Competence in Selected North American Evangelical Missions**

The purposes of this study on missionary competence were three-fold: first, to do an investigation of the correlation of missionaries' education and training for mission with self-perception and national/missionary-colleague perceptions of effectiveness in the multi-varied skills needed for intercultural adaptation, acculturation ("process in time" including culture and language-learning levels and socialization depth), and ministry (such as personal growth, ministry growth, spiritual dynamics, and contextualization of work); second, to identify predictors and criteria measures of cross-cultural ministry effectiveness, out of these developing a profile of missionary competence; and third, to explore definitions and current concepts of competence as they pertain to cross-cultural adjustment, acculturation, and ministry.

A sample of 120 missionaries who were in their 1st, 2nd, 3rd, 4th, and 5th terms (of 4-5 years each) in Brazil with six different evangelical missions (New Tribes Mission, Southern Baptists, UFM International, Christian Missions to Many Lands, Association of Baptists for World Evangelism, and the Christian and Missionary Alliance) filled out a questionnaire with 13 instruments which included 1) general background and education, 2) personal growth, 3) ministry skills growth, 4) FSI language proficiency, 5) acculturation, 6) capacity to contextualize ministry, 7) spiritual dimensions, 8) adjustment, 9) personal expectations, 10) personal satisfactions, 11) Hawes and Kealey's personal dimensions, 12) social involvement, and 13) an acculturative problem-solving scale. Corroboration of the data gathered on the 120 missionaries was through cross-check instruments filled out by missionary co-workers and national colleagues.

Statistical analysis procedures included item statistics, factor analysis, regression analysis, discriminant analysis, split-end profile analysis, and for reliability, T-tests and Inter-rater Reliability (IRR) measures. The theoretical hypotheses and sub-hypotheses of the study which appeared to be empirically verified postulated 1) that there is a significant positive relationship between ministry effectiveness and the extent to which ministry knowledge and skills are contextualized, 2) that contextualization is affected by the extent to which the missionary identifies with the culture and the people (acculturation), 3) that missionaries who demonstrate higher levels of "spiritual dynamic" in their ministries are more competent in ministry, 4) that cross-cultural interaction skills are influenced by personality characteristics (traits), 5) that missionaries who are actively involved socially with the people are better acculturated and better able to contextualize their work, and 6) that cross-cultural ministry is sufficiently complex to make general predictors of cross-cultural ministry competence also diverse, complex, and difficult to utilize.

The highest general correlates to missionary cross-cultural competence were found to be first, spiritual dynamics, second, personal characteristics, followed by social involvement with the people, and then, only incidentally, prior education and training. A profile of "the competent missionary" was developed out of the predictors and criteria of competence derived from the data. Based on predictors and criteria of competence derived from the data, a profile of "the competent missionary" was developed along with a brief discussion on the implications of competence-oriented training for missionary education.



## CHAPTER ONE

### PURPOSE AND PLAN OF THE STUDY

#### Introduction

A study of the great missionary conferences from 1860 to 1910<sup>1</sup> shows that missionary leaders and statesmen were deeply aware of the need for missionaries to identify with, learn from, and communicate competently with the people they lived among.. For example, in 1860 at the Liverpool Conference, delegate Rev. Joseph Mullens called for “good, plain men, who can speak the language fluently, and argue with common people clearly and cogently,” adding, “...we do need also the few who can study the notions and deep theories on which Hinduism and Chinese Buddhism are based, and deal boldly and successfully with the ultimate points of controversy. ...Let such a one, if he possesses the faculty, study Sanskrit, learn Arabic and Persian and...go deep into Chinese lore; master the controversies, and provide books....”<sup>2</sup> His later statements sound like maxims of contemporary cross-cultural communication theory:

"As to the people he must seek also thoroughly to know **them**. He must know their language, their customs, their notions, their habits, their religious ceremonies, the motives by which they are most powerfully swayed. He should understand all the accompaniments and agencies of that training which has made them what they are. His own training, knowledge, and habits are usually so different from theirs, that, quite apart from the difficulty of getting Christian doctrine into their minds, in ordinary intercourse with them he may make such mistakes, and so offend their prejudices, as quite to set them against him and his plans. By carefulness in these things, by correct information, and by that consideration which wins confidence the world over, he may break down the barrier which divides him from them. He ought therefore to know them, that they may know him. He acts in this matter under a general law, which rules every minister of Christ in the world, that he must adapt himself to those whom he is going to instruct. He must know the current notions, customs, ceremonies, practices, ruling motives, superstitions, hopes and fears, of the people around him.

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<sup>1</sup>W. Richey Hogg states that the missionary conferences of the later nineteenth and early twentieth centuries were "a valuable index into the life, problems, thought, concerns, and growth of mission and church." W. Richey Hogg, "Missionary Conferences," in The Concise Dictionary of the Christian World Mission, Stephen Neill, Gerald H. Anderson and John Goodwin (eds.) (London: United Society for Christian Literature, 1971) pp. 131.

<sup>2</sup>Conference on Missions Held in 1860 at Liverpool (London: James Nesbet and Co., 1860), p. 24.



He must know not merely ancient China, ancient India, ancient Africa; he must know living China, living India."<sup>3</sup>

Mullens emphasized that, to be able to accomplish this, the missionary must have a thorough mastery of the current vernacular and be able to communicate with the people in that vernacular.<sup>4</sup> The beginnings of the knowledge of this tongue--certain points in grammar, language, and ideas--could possibly be learned in the year before going to the field, but certainly upon the field the mode of acquisition was to "strive to enter as much as possible among the people... Let him walk abroad, and though he cannot speak much let him see much, and familiarize himself with all the outer manifestations of native life. For the first year or two, his principal attention should be given to the language and to books about the natives." To be able to preach to the people in the vernacular (the most excellent form for evangelism)<sup>5</sup> "extensive study will be required, and great material."<sup>6</sup>

Statements such as these, while fairly common in the international missionary conferences prior to World War I, are astonishing from our viewpoint considering the state of cultural and anthropological knowledge of that day.<sup>7</sup> While how people were to be trained was not specified clearly in any of the conferences, the need for training tied to competence was repeatedly called for. For example, R.P. Mackay, Secretary of the Foreign Missions

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<sup>3</sup>Ibid. p. 19. Author's emphasis.

<sup>4</sup>Mullens considered that this should be made a rule for every missionary. "Hence it should seem to be a good rule, right and wise, that every missionary going to a heathen land should thoroughly master the vernacular, and be able to address the people in their own tongue. ...There may be exceptions to the rule...but I do not know one missionary who does not consider that, to have learned the language when commencing missionary life, would have added greatly to his usefulness." (Ibid., p. 20) Rev. Leupolt, of Benares, was even stronger. "Every missionary committee should make a law, as inflexible as the laws of the Medes and Persians ever were, that no missionary going to a new sphere of labour should have anything to do with English for a year and a half, even though he be appointed a teacher to one of the English colleges." (p. 31) Rev. Thomas Green, of the Church Missionary Society, quoting a friend in India, Rev. Bruce, stated that the first year was everything in learning the language. "Take up the language in a half spirit, and years will pass away ere you can speak properly in it; or rather you never will. Give yourself wholly to it, mix but sparingly in English society, and...the most ordinary intellect will be sure to acquire the language..." (p. 29)

<sup>5</sup>"Vernacular preaching is a work of such great importance, and the power to carry it on is so valuable, that missionary societies should give it their best attention." (Ibid., p. 21,22)

<sup>6</sup>"He needs well-prepared discourses that clearly expound the gospel, show where it opposes idolatrous views and practices, anticipate objections, fall in with native modes of thinking, and starting from their own platform, convey knowledge which they never had before." (p. 21).

<sup>7</sup>For example, anthropology, so common in missionary training today, in the early 1800's had only reached its barest beginnings as a body of systematic knowledge. Conceptually, it was divided between biology and moral philosophy. Even though a number of societies such as the Royal Geographical Society came into existence between 1830 and 1840 to improve on ethnographic data collection, there was *no science of cultural classification, as such*. From the middle of the nineteenth century until the second decade of the twentieth, anthropology was highly diffusionist and evolutionist. Not until the 1920's with the development of functionalism did anthropology finally break away from the exclusive interest it had had in biological (racial) questions. For an extensive discussion on the development of anthropological thought and its influence on the missionary enterprise see Charles R. Taber, The World is Too Much With Us: "Culture" in Modern Protestant Missions, (Macon, Georgia: Mercer University Press, 1991), especially chapters 2 through 4, pp. 13-88.



Committee, Presbyterian Church in Canada, at the Ecumenical Missionary Conference in New York, 1900,<sup>8</sup> called for preparation that would result in ministry competence.

How can a man satisfactorily know his fitness for a work, or department of work, when he does not know what the work is? A man does not enter blind-fold upon an engagement in the home land. Yet men pass through our seminaries, absolutely ignorant of the climactic and social conditions, and the intellectual and spiritual requirements of even the mission fields of the church to which they belong, and in which they hope to labour.

When foreign missions have grown to such proportions, is it not a reasonable demand that colleges should give some attention to such studies as directly equip men for that work--and studies, too, that cultivate the intellect and heart, as well as help men to take their own measurements, to determine the place in the world's economy for which they are best designed?<sup>9</sup>

In other words, academic study had to be tied in in some way with the realities of what missionaries would face in field work. This need was reiterated by W.H. Thomson, President of the New York Academy of Medicine when he stated, "the first requisite of a foreign missionary is to learn how to put himself in others' places," that is, to be able to think and feel as if born in a wholly Asiatic or African environment, to recognize how the environment of others has created for them their thoughts, conceptions, beliefs, and especially feelings.<sup>10</sup> This is because the biggest hindrance to the spread of the gospel is mutual misunderstanding". Therefore a prime duty is to "thoroughly learn the social manners and customs of the people...so he can become a perfect gentleman in their society sense (sic)."<sup>11</sup>

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<sup>8</sup>Held in Carnegie Hall and Neighbouring Churches, April 21-May 1, 1900. There were 2,500 delegates with public sessions attended by over 200,000. Of 500 speakers only eight were not European or American. Collations of the conference addresses and reports are in Ecumenical Missionary Conference on Foreign Missions, Held in Carnegie Hall and Neighbouring Churches April 21-May 1. 2 Vols. New York: American Tract Society, 1900.

<sup>9</sup>R.P.Mackay, "Choice and Qualifications of Missionaries", Vol. 1, Ecumenical Missionary Conference...., p. 302.

<sup>10</sup>T.S.Wynkoop of the British and Foreign Bible Society verified this need when he stated, "The non-Christian religions should be studied not in books only, but in living men, and in the religious and social institutions which have grown out of these religions. With due deference to the many able scholars and writers who have assayed translations, expositions, and popular lectures on the religions of the East, it is impossible to state Eastern thought in terms of the English language. Not to insist upon the absence from our speech of properly differentiated technical terms, we must remember that our language is essentially Christian. ...The language we use is not a colourless medium of thought; a Christian language of necessity gives a Christian colouring to the thought expressed. Edwin Arnold's 'Light of Asia' gives a semi-Christian Buddha. It is a beautiful poem, but not Buddha history." (Vol. 1, p. 363).

<sup>11</sup>W.H.Thomson, *ibid.*, p. 305. This concern for learning the social customs of the people was to be many times repeated in conferences. Cf. C.W. Drury, "Mental Preparation for Missionary Work" Students and the Missionary Problem: Addresses Delivered at the International Student Missionary Conference, London, January 2-6, 1900 (London: Student Volunteer Missionary Union, 1900), pp. 173-174. Rev. Richard Glover, "The Need for Thinkers for the Mission Field" Students and the Missionary Problem: Addresses Delivered at the International Student Missionary Conference, London, January 2-6, 1900 (London: Student Volunteer Missionary Union, 1900), pp. 221-229. Dr. J.F. McCurdy, University of Toronto, stated, "I have been very much disappointed sometimes, when questioning returned missionaries on special topics of importance, to find their ignorance of



One means suggested was to study their literature and arts. Dr. Thomson did not state where or how this learning was to take place though it could be assumed he was thinking of field-based study. In any case, he hit upon a very real lack in missionary training. His recommendations put into effect would have gone a long way toward meeting the lack of inter-cultural training in missionary education of that day.

### Overview of the Current Problem

This issue of ministry competence is still very much with us. Spitzberg and Cupach state that "competence is an issue that is both perennial and fundamental to the study of communication."<sup>12</sup> Competence in communication has been called "the missionary problem, par excellence."<sup>13</sup> Hendrick Kraemer, speaking of the evangelistic task of the church writes,

At the very moment a Church commences to turn away from the introversion in which it is steeped by its acceptance of being primarily an established institution, and looks at its real field, the world, a new realism awakens. Innumerable questions immediately assail such a Church, such questions as What am I? To what purpose am I? Am I fulfilling this purpose? Where and how do I live? In a ghetto, or in living contact with the world? Does the world listen when I speak to it, and if not, why not? Am I really proclaiming the gospel, or am I not? Why has such a wall of separation risen between the world and what I must stand for? Do I know the world in which people live, or do I not? Why am I evidently regarded as a residue of a world that belongs irrevocably to the past? How can I find a way to speak again with relevancy and authority, transmitting "the words of eternal life" entrusted to me? Amidst the welter of such questions, engendered by a newly awakened apostolic consciousness, communication has become a problem with which the Churches everywhere are wrestling."<sup>14</sup>

Nor are just the churches wrestling with the problem of competence in communication. Rubin's study of the communication competence of college students concluded that

11 percent of the students tested had problems asking a question; 33 percent could not organize ideas well; 32 percent could not give accurate directions; 35 percent could not adequately express and defend a point of view; 10 percent didn't know

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fundamental things,--the life of the people, their habits, their traditions, the ideas of the people that they have been trying to undermine, first through intellectual sympathy with the thoughts of the people and then through moral sympathy, and then by using the Word of God aright and by invoking the Spirit of God." World-wide Evangelization--The Urgent Business of the Church (New York: Student Volunteer Movement for Foreign Missions, 1902), p. 579, my emphasis. James L. Barton, "Intellectual Equipment and Continual Growth Indispensable to Largest Success in Mission Work" Students and the Modern Missionary Crusade, (New York: Student Volunteer Movement for Foreign Missions, 1906), pp. 109-110.

<sup>12</sup>Brian H. Spitzberg, and William R. Cupach, Interpersonal Communication Competence, (Beverly Hills, CA: Sage Publications, 1984) pp. 11.

<sup>13</sup>David J. Hesselgrave, Communicating Christ Cross-Culturally, (Grand Rapids, MI: Zondervan Publishing House, 1980, title of Chapter 1, "Communication, the Missionary Problem Par Excellence"), pp. 19-27.

<sup>14</sup>Hendrick Kraemer, The Communication of the Christian Faith, (Philadelphia, PA: Westminster Press, 1956), pp. 10-11. Cited also in Hesselgrave, *ibid.*, p. 19.



the difference between a fact and an opinion; and 49 percent could not describe the point of view of a person who disagreed with them.<sup>15</sup>

Spitzberg and Cupach refer to the conclusion of an American nationwide study undertaken by the Adult Performance Level Research Project of the University of Texas - Austin which concluded that "taking the U.S. population as a whole, approximately one-fifth of adults are estimated to be functionally incompetent."<sup>16</sup> Argyle, referring to various studies of social skills difficulty in the British population suggests that "at least 7 per cent of the normal adult population have fairly serious difficulties with social behaviour" where the criteria include 1) seeking help or accepting it when offered, 2) avoidance of or experiencing great difficulties with many everyday situations, or 3) behavioural evidence of social inadequacy such as lack of friends and lack of success in work that requires interaction.<sup>17</sup>

### Competence and Missionary Education

In the United States and Canada education has come under increasingly vocal criticism as standardized tests indicate serious pre-university educational decline.<sup>18</sup> There appears to be a shifting from subject-matter concerns to identification of specific skills and abilities, resulting in some educators referring to **competency** as an educational goal.<sup>19</sup> In the same way, there has been concern among mission leaders and theological educators regarding the quality of pastoral and missionary training. Peter Savage, Rector of the George Allan Theological Seminary in Cochabamba, Bolivia, questioned the current pattern of theological training.

Many seminaries have never undertaken an examination of the total needs of the ministry and thus established a comprehensive statement of objectives. They have been satisfied that a certain quatum of knowledge, adequately digested, will give the graduate a degree which in turn will give him status in the church community as a pastor, teacher, or evangelist. Many are asking today whether this degree is really a valid statement of qualifications for a church ministry. Could it be comparable with, say, a jet pilot, who when he graduates from flying school can really fly? An airline hiring this pilot must be assured of his competence, skill, and knowledge to fly its plane. Does an M.Div., Th.M., or Th.D. really assure a church that the man is sufficiently trained, skilled, competent, and knowledgeable to become its leader? <sup>20</sup>

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<sup>15</sup>Rebecca B. Rubin, The Development and Refinement of a Communication Competence Assessment Instrument. Paper presented at the meeting of the Speech Communication Association, Boston, 1981. Cited in Spitzberg and Cupach, Interpersonal Communication Competence, p. 13.

<sup>16</sup>Spitzberg and Cupach, Interpersonal Communication Competence p. 14.

<sup>17</sup>Michael Argyle, "Interaction Skills and Social Competence.," in The Social Psychology of Psychological Problems, ed. Philip Feldman and Jim Orford (Chichester, England: John Wiley and Sons, 1980), pp. 143.

<sup>18</sup>James C. McCroskey, "Communication Competence, the Elusive Construct," in Competence in Communication: A Multi-Disciplinary Approach, ed. Robert N. Bostrom (Beverly Hills, CA: Sage Publishers Inc., 1984), p. 259.

<sup>19</sup>John M. Wiemann, and Philip Backlund, "Current Theory and Research in Communicative Competence," Review of Educational Research 50 (1980): 185.

<sup>20</sup>Peter Savage, "Four Crises in Third World Theological Education," Evangelical Missions Quarterly 9 (1972): 28-29.



Savage's concern for the inadequacy of theological education has some research backing. Robert Ferris, in a study of leadership development in four theological institutions, focused on how academic content (related to servant-leadership) and such non-cognitive qualities as faith, empathy, integrity, virtue, leadership, altruism, zeal, involvement, wisdom, and self-acceptance were reflected in both formal (curricular) and informal components of the total training. Twelve research questions guided his survey. Two had to do with how training for servanthood was presently incorporated into seminary training. Eight dealt with principles identified as effective in training for helping professions and two others focused on orientation of faculty, courses, and trends in the Seminary to preparing servant-leaders. Thus, students and faculty alike were questioned on 1) whether the seminary program developed people who manifested these qualities, 2) sources commonly used for deriving teaching/learning objectives, 3) teaching methods commonly used, 4) courses that provided effective training, and 5) whether the school emphasized or de-emphasized these qualities. Faculty received a special questionnaire that focused on "present intentions," "training base," and "training method."

His conclusions:

Findings are not encouraging regarding present attempts to implement commitment to train for servant ministry. No consensus was observed related to curriculum elements intended to develop qualities of a servant minister. Demonstration of servant minister qualities in present seminary curricula, furthermore, exists primarily in unstructured, informal elements.

Examination of the six program characteristics identified as significant in training for helping professions indicated seminaries have incorporated few of these elements. Seminary trainee selection focuses on academic qualification and (a largely undefined) 'fitness for ministry.' Curriculum priorities are assigned to theological and ecclesiastical traditions. Training objectives are usually derived through analysis of the course subject or discipline and on the basis of theological commitments regarding the nature of ministry. Seminary training most commonly makes use of lecture, reading and research, or discussion of lectures or research as preferred teaching methods.<sup>21</sup>

Edgar Elliston observes, "The professionalization of the ministry is often supported by an elitist call for academic excellence. The rally cry for academic excellence rings hollow if the excellence is not defined in terms of meeting the basic purposes of the Church--to bring all men to Christ and then to bring them to a serving and reproducing maturity within the church." <sup>22</sup> Donald McGavran argues that "a maintenance mentality... dominates most seminary faculties," with their focus on preparation of pastors for parish ministry, not for

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<sup>21</sup>Robert W. Ferris, "The Emphasis on Leadership as Servanthood: Analysis of curriculum Commitments" (Ph.D. dissertation, Michigan State University, 1982), pp. 158-159.

<sup>22</sup>Edgar J. Elliston, "Designing Leadership Education," Missiology: An International Review 16 (1988): 204.



evangelism.<sup>23</sup> They teach a “classic” curriculum of Bible, History, Theology, etc., but not how to evangelize non-believers and multiply churches. He further charges seminaries with failing to prepare students to be able to communicate the gospel effectively to secularized man, to respond to the plethora of religious beliefs and values in our pluralistic society and world, and through evangelism see the Church grow.<sup>24</sup>

Ralph Winter makes the observation that the vast majority of missionaries are not involved in basic evangelism and church-planting (what he calls the classic missionary task) but that

almost all the older boards and agencies are today almost entirely involved overseas with the kind of work which in this country is normally called nurture or home missions. This is not to conclude that the vast flurry of activities of thirty-seven thousand missionaries shouldn't be. It is rather to emphasize that what we are now doing in missions is extremely and uneasily different from what has always been intended by the classical missionary movement. Indeed, the only justification for the present state of affairs would seem to be the total absence of the 'regions beyond.' But the regions beyond are still there and they're massive.

...the preponderance of personnel are in church development, education, and health. With the exception of Wycliffe Bible Translators, and Regions Beyond Missionary Union, and a few other highly specialized agencies, virtually all mission boards with more than twenty-five years of effort behind them are by now focused primarily on the care and feeding of existing Christian communities.<sup>25</sup>

While this is beginning to change as more and more missions become concerned about “unreached peoples,” complaints continue to come through from various areas of the world about the inabilities of missionary candidates to communicate the gospel effectively and appropriately, in spite of the new academic courses on communications, anthropology and sociology, and missiology.<sup>26</sup> Edwin L. Frizen, Executive Director of the Inter-denominational Fellowship of Mission Agencies (IFMA) makes the following observation related to the competency weaknesses found in some missionaries. Among them there is...

- “a. A lack of perception in separating out that which is the essence of the gospel and that which is a cultural form of expression. Training that reinforces a middle-class role and suburban packaging of the faith.

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<sup>23</sup>Donald A. McGavran, Effective Evangelism: A Theological Mandate, (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1988), p. 3.

<sup>24</sup>Ibid., pp. 1-12.

<sup>25</sup>Ralph Winter, “Penetrating the New Frontiers,” in Unreached Peoples '79, C. Peter Wagner and Edward R. Dayton (ed.) (Elgin, Illinois: David C. Cook Publishing Co., 1979), pp. 43-44.

<sup>26</sup>Ron Fisher, “Why Don't We Have More Church-Planting Missionaries?,” Evangelical Missions Quarterly 14 (1978): 205-211. George Murray, General Director of the Bible Christian Union and head of the Europe Committee of the Evangelical Fellowship of Mission Agencies (EFMA) wrote an open letter to the Association of Evangelical Professors of Missions (AEPM) voicing his concerns that few of the candidates in evangelical missions going to Europe demonstrated interest in or ability to do evangelism, pleading with them to reinstate such training as a priority in theological/missiological training. Jim Taylor, “Where are the Evangelists? Mission Agencies Want To Know,” The Gospel Message 3 (1989): 3.



- “b. Failure to find security in Christ and thus to seek it by isolation from the world in fellowship with other missionaries thus learning a compound mentality.
- “c. Lack of inter-personal coping skills; tendency to spiritualize simplistic solutions for emotional human problems and conflicts; inadequate understanding of techniques and tools for handling stress.
- “d. Lack of adequate, positive self-image; tendency to ignore legitimate personal needs for the sake of the work.
- “e. Lack of confidence in moving into new situations; not a self-directed person; doesn't know where and how to begin in a new cultural environment.
- “f. Inability to integrate theory into real life. The professor teaches theory but doesn't risk himself in performance before the student in the real world.
- “g. Lack of understanding of how to communicate the gospel in diverse environments.
- “h. Tendency to reflect a negative orientation to the Christian life.
- “i. Lack of knowledge of the behavioural science skills and how they can be integrated with the Christian life and the missionary task.”<sup>27</sup>

Frizen added,

We have often faced the dilemma of having young people who are very interested in the church-planting outreach, but as they get into the work they confess that they do not know how to do it. I have long felt that the methods used in scientific subjects ought to be applied to training for Christian work--namely, that there ought to be at least an equal amount of time spent in the 'laboratory' as in the classroom. The teacher ought to be with the students in teaching them how to do home visitation, personal evangelism, etc.<sup>28</sup>

The issue of competence is obviously a concern for any educational paradigm that has both personal and “professional” development in view. Background and upbringing of the missionary, work experience, academic background, personal development, altercentric orientations and motivations, practical skills and competencies, marital status, flexibility, and many other factors all play a part in final ministry competency.

### **Competence and Missionary Attrition**

The business world has statistically had the highest rates of attrition from overseas assignments, small and medium-sized companies achieving the highest records of attrition because of their smaller selection and training budgets and short-term perspectives. One company, for example, had an annualized attrition rate of 368% from a project in Saudi Arabia; another had a 140% premature return rate.<sup>29</sup> Gupta indicates that some organizations in Saudi Arabia have experienced a 60% - 90% failure rate, while in general

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<sup>27</sup>Edwin L. Frizen, Jr., "Executives Tell Mission Profs What They Think," Evangelical Mission Quarterly 8 (1972): 145.

<sup>28</sup>Ibid.

<sup>29</sup>Linda Edwards, "Present Shock, and How to Avoid it Abroad," The Bridge 2 (1978): 32.



world-wide one in three Americans fails to complete his or her period of contract.<sup>30</sup> One study found that nine out of ten expatriates are less successful in Japan than in their home country, while four out of five expatriate managers are considered failures by their home offices.<sup>31</sup> Many of these returnees are highly competent people in their home business contexts but find those very competencies (of aggressive, hard-nosed, efficient, individualistic work patterns) actually working against them in the cross-cultural context.<sup>32</sup> While some have continued to argue for the very *best* people to be sent (with proper training),<sup>33</sup> others argue that mid-level management and even technicians may actually be more flexible and in the long run be more effective cross-culturally.<sup>34</sup>

The Peace Corps realized a 10% and 17% early termination rate from the field during their first two years of existence.<sup>35</sup> During the sixties the rate rose to as high as 37% premature return (1969)<sup>36</sup> and during the seventies in some years the attrition stood even higher. The British Volunteer Service Organization (VSO) claims an attrition rate of 11%.<sup>37</sup>

Missions have their own attrition problems. In a broad study conducted by the Missionary Research Library of the years 1953-1962 of 36 conciliar and non-conciliar Protestant North American missions researchers found that 2,379 withdrawals had occurred (about 15% of the missionary force) at the end of six years of service. Twenty-eight percent

<sup>29</sup>Linda Edwards, "Present Shock, and How to Avoid it Abroad," The Bridge 2 (1978): 32.

<sup>30</sup>Guptara points out that the failure rate among Europeans is considerably better at one in seven. Prabhu Gupta, "Searching the Organization for the Cross-Cultural Operators," International Management 41 (1986): 40-41. The same figure is given by Michael A. Conway, "Reducing Expatriate Failure Rates," Personnel Administrator (1984): 31.

<sup>31</sup>Yoram Zeira and Moshe Banai, "Present and Desired Methods of Selecting Expatriate Managers for International Assignments," Personnel Review 13 (1984): 29. These statistics are not much better than they were back in 1965 when 80% of American executives could not adjust to Japanese ways of doing business. Cecil G. Howard, "Model for the Design of a Selection Program for Multinational Executives," Public Personnel Management (1974): 138.

<sup>32</sup>Frederica Hoge Dunn, "The 'Best Man' Theory and Why It Fails," The New York Times July 16, 1978.

<sup>33</sup>David Pulatie, "How Do You Ensure Success of Managers Going Abroad?," Training and Development Journal 39 (December 1985): 22-24.

<sup>34</sup>Dunn, *idem.*

<sup>35</sup>While the report given by Captane P. Thomson and Joseph T. English, "Premature Return of Peace Corps Volunteers," Public Health Reports 79 (1964): 1065 claims a 5.4% premature return rate from the field, a table of worldwide rates of attrition of Peace Corps Volunteers from 1961 to 1971 in Jesse G. Harris Jr., "A Science of the South Pacific: Analysis of the Character Structure of the Peace Corps Volunteer," American Psychologist 28 (1973): 235 gives the 10% and 17% rates.

<sup>36</sup>Harris, "A Science of the South Pacific..." *ibid.*, p. 235. Rates of attrition: 1961-10%; 1962-17%; 1963-14%; 1964-13%; 1965-15%; 1966-22%; 1967-29%; 1968-36%; 1969-37%. Total attrition included small percentages of medical discharges, administrative discharges, and political upheavals in some countries, as well as occasionally larger losses from military inductions. However, since the rate of attrition is on a relatively linear scale upward, apparently avoidable attrition was increasing.

<sup>37</sup>Guptara, *idem.*, p. 42.



withdrew from missionary service at the end of ten years.<sup>38</sup> At about the same time Cleveland, Mangone, and Adams estimated an attrition rate of 25 percent.<sup>39</sup> Figures of anywhere from twenty to fifty percent have been suggested though few missions are willing to publish statistics.<sup>40</sup>

Generally, evangelical missions have a lower attrition rate than do secular international volunteer and business organizations. Ferguson, Kliwer, Lindquist, Williams, and Heinrich in a survey return from 39 Evangelical Foreign Mission Association (EFMA) member missions averaged a 5.5% rate of loss for the 39 sending agencies over a five year period.<sup>41</sup> In a 1986 report Michael Pocock, Candidate Secretary for the Evangelical Alliance Mission (TEAM), identified an 8% attrition rate for TEAM including retirees and associate turnover, resulting in a *1.6% presumably avoidable attrition*. Some of the reasons for attrition included 1) a desire to help children over the hurdle between high school and college, 2) caring for elderly parents, 3) chronic over-extension (insufficient support), and 4) under-productivity, misconduct, and friction with co-workers.<sup>42</sup> The Southern Baptists, another large denomination, claim an equally low attrition rate of 3% over the years 1957-1986.<sup>43</sup>

A study done by Craig Hanscombe on missionaries of the Christian and Missionary Alliance (C&MA) during 1976 to 1978 found that 27.6 percent of the cases under study were casualties. Factors influencing attrition included difficulty of field, level of education and theological training, number of children couples had when they were sent, age, grade point average, psychological and medical evaluations, length of home service, and length of time since conversion to Jesus Christ.<sup>44</sup> A follow-up study on attrition from 1973-1983 done by the same denomination (the Christian and Missionary Alliance) indicates that *the overall attrition rate has remained stable at an average of 5.8% (or 6.2% of real total missionary*

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<sup>38</sup>Helen L. Bailey and Herbert C. Jackson, A Study of Missionary Motivation, Training, and Withdrawal, (New York: Missionary Research Library, 1965). A summary of this study is included in Herbert J. Kane, Winds of Change in the Christian Mission, (Chicago: Moody Press, 1973), p. 56.

<sup>39</sup>Harlan Cleveland, Gerard Mangone and John Clarke Adams, The Overseas American, (New York: McGraw-Hill Book Company, Inc., 1960), p. 265.

<sup>40</sup>Lundquist, who suggests these figures, must be taking short-termers into account at the high end. Percentages are also likely affected by differences in acceptance policy, training, and field factors. Richard J. Arndt and Stanley Lundquist, "Twenty to Fifty Percent Fail to Make It--Why?," Evangelical Missions Quarterly 12 (July 1976): 142.

<sup>41</sup>Larry N. Ferguson, Dean Kliwer, Stanley E. Lindquist, Donald E. Williams, and Robert P. Heinrich, "Candidate Selection Criteria: A Survey," Journal of Psychology and Theology 11 (1983): 243-250.

<sup>42</sup>Frank Allen, "Why Do They Leave? Reflections on Attrition," Evangelical Missions Quarterly 22 (1986). Attached to the article a summary of TEAM attrition by Michael Pocock, pp. 122-123.

<sup>43</sup>In 1986 it was only 2.45 percent. Leland Webb, "Life After Resignation," The Commission, Feb-March 1988, p. 50.

<sup>44</sup>Craig Hanscombe, "Predicting Missionary Dropout," Evangelical Missions Quarterly 15 (July 1979): 152-157.



staff, including short-term and special assignment personnel). Attrition was calculated in three categories: Category I including death, retirement, disability, marriage, home service, transfer, closing of field of service, and health; Category II including leave of absence, special assignment, teaching at denomination schools, and completed contract; and Category III including moral or marital problems, unsatisfactory service, doctrinal differences, personal/family/ emotional problems, failure to achieve minimum facility in language, and incompatibility with leadership. In this latter category (the *unacceptable or negative attrition rate*) attrition was 1.3 % of real total missionary staff.<sup>45</sup>

On the other hand, the World Gospel Mission reported a higher rate of 30.1 percent attrition (for the years 1954 to March 1984) for reasons other than death or retirement, most of these occurring at the end of the first four or five years on the field. Major problems cited included care for the health of family members, education of children, and desire to work with another mission.<sup>46</sup>

Predictors of attrition found in the various studies show some interesting patterns. A study of 118 case histories carried out by Gordon Fraser in 1958 showed that of respondents 58 percent dropped out because of inability to relate to the culture or other people, and 45.5 percent left because of lack of personal discipline. Two percent were not able to utilize their knowledge in a practical manner and seven percent left because of moral problems.<sup>47</sup> Hanscombe's study identified maturity defined by number of children and level of education as predictive of attrition.<sup>48</sup> The C&MA study found attrition higher among singles, those without graduate training (as in the Hanscombe study<sup>49</sup>), those who had been in the pastorate before going overseas, those whose calling to missionary ministry is predicated on "need" rather than the "biblical mandate," those who are appointed younger (under the age of 26), and those who studied at non-C&MA graduate schools.<sup>50</sup>

The Missionary Research Library report identified health and interpersonal difficulties (lack of cooperation and communication between colleagues) as the two most salient factors resulting in attrition. The Conservative Baptist Foreign Missionary Society

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<sup>45</sup>Christian and Missionary Alliance Division of Overseas Ministries (DOM), Attrition of Candidates and Missionaries in the Christian and Missionary Alliance, 1973-1983 (Nyack, New York: Christian and Missionary Alliance, December 1984), pp. 14-16.

<sup>46</sup>Burnis H. Bushong, summary of World Gospel Mission attrition attached to article by Frank Allen, "Why Do They Leave? Reflections on Attrition," *idem.*, pp. 128-129.

<sup>47</sup>Gordon Fraser, "A Survey of First Term Missionary Casualties," Bibliotheca Sacra 115 (1958): 44-49.

<sup>48</sup>Craig Hanscombe, "Predicting Missionary Dropout," *idem.*, pp. 152-157.

<sup>49</sup>Hanscombe found that of those who withdrew prematurely, 33.3% were without graduate study compared to 14.7% of those with graduate study. The discipline and increased maturation that results from further study has its impact on the lives of candidates.

<sup>50</sup>Christian and Missionary Alliance Division of Overseas Ministries (DOM), *idem.*, pp. 19-20.



(CBFMS), while not stating attrition rates, identified several reasons for attrition of their missionaries. Fifty percent left for personal needs, the primary being physical or emotional health, followed closely by family concerns (especially education of college age children). Twenty percent left as a result of work difficulties, the most frequently cited being interpersonal conflict, while another twenty percent resigned because of difficulties arising from administrative structures.<sup>51</sup>

Few of the studies on attrition specifically identify lack of ministry competence, though almost all factors, apart from family and education needs, fall within the competence paradigm. Frank Allen's overview of reasons for attrition considers some of these factors. His *first* concern is with missionary *lack of gifts*. He asks,

"How many missionaries have tried a field ministry without the requisite gifts? We can only guess, but I have been shocked looking over candidate papers of potential evangelists and church planters. When asked about their evangelistic experiences, most could only say that they had led a junior Sunday School boy to Christ or an "eight-year-old girl at camp." Few could tell about any experiences with adults on a regular basis. Yet here they were, wishing to minister to adults in another culture, in a strange language, to establish churches. They had never done anything like this in their own culture and tongue. Their subsequent work revealed their lack of gifts and many gave up and went home."<sup>52</sup>

*Secondly*, Allen identifies culture shock/culture fatigue (and it's correlative ethnocentrism) as a salient attritive factor, because of the refusal or inability to change and adapt to different ways of doing, thinking, speaking, and perceiving. *Thirdly*, inflexibility or inability to shift roles, responsibilities, and ministries results in some attrition. The position that the missionary volunteer had been recruited for has in the meantime been filled and the individual is unable to shift to another ministry or position. *Another* factor identified was failure to subject oneself to the discipline of mastering another language, a critical competence in cross-cultural ministry. *Finally*, inability to relate interpersonally to fellow missionaries and field leaders as a result of "characteristic North American individualism" is a problem related to ministry competence.<sup>53</sup>

Perhaps the most individual-specific study on reasons for missionary attrition was that done by Laura Mae Gardner on 16 case studies of Wycliffe terminees.<sup>54</sup> In it she found that 1) stated reasons for termination were seldom the actual reasons, 2) there was recurrent evidence of lack of Bible knowledge shown by failure to use spiritual resources and to base

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<sup>51</sup>Dave Camburn, summary of CBFMS attrition attached to article by Frank Allen, "Why Do They Leave? Reflections on Attrition," *idem.*, pp. 126-127.

<sup>52</sup>Frank Allen, "Why Do They Leave? Reflections on Attrition," *idem.*, p. 119.

<sup>53</sup>*ibid.*, pp. 118-122

<sup>54</sup>Laura Mae Gardner, "A Case Study Examination of Missionary Terminations" (Unpublished dissertation, D.Min., Conservative Baptist Seminary, 1984).



decision making, conflict resolution, and personal emotional and spiritual needs on Biblical and spiritual principles, 3) personal problems included restiveness under authority, defensiveness, low self-esteem, concern for money and possessions, and lack of education, 4) there was excessive expectation on the part of host country and field, mission leadership, and home constituency resulting in overwork, and 5) attrition was often caused by internal family needs and pressures, and stress.<sup>55</sup>

Attrition *from* the field is one thing. There is also "on-field" attrition from critical ministries. Ron Fisher (of UFM Int'l) expressed concern at the attrition rate from church-planting and evangelism to other ministries such as education, pastoral ministry, camp ministries, literature, etc.<sup>56</sup> The C&MA study identified their highest rate of attrition to be among church-planters.<sup>57</sup> Tom Eckblad (South America Mission) notes the abnormally high drop-out rate among missionaries who begin church-planting during their first term, identifying five major pressure points that push them out: 1) the problem of role identification, 2) the broader participation required in culture and society than is the case for those in institutional work, 3) the need for initiative and self-management, 4) the difficulties of evangelism, and 5) the fact that church-planting is more an art than a science and requires creativity and innovation.<sup>58</sup>

What of those who stay on the field but with reduced capacities and competence? Myron Loss found in his research that 74 percent of missionaries with ten years or less field experience (N=113) indicated problems of self-esteem as a result of the ennui experienced in adjusting and acculturating.<sup>59</sup> He argues that low self-esteem and the high stress symptoms associated with the cross-cultural situation are closely related to missionary drop-out and limited effectiveness. Based on his field experience and research Loss estimates that one out

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<sup>55</sup>For condensed review of these points see Laura Mae Gardner, "Proactive Care of Missionary Personnel," Journal of Psychology and Theology 15 (1987): 308-314.

<sup>56</sup>Ron Fisher, "Why Don't We Have More Church-Planting Missionaries?," *idem.*, pp. 205-211.

<sup>57</sup>Christian and Missionary Alliance Division of Overseas Ministries (DOM), Attrition of Candidates and Missionaries in the Christian and Missionary Alliance, 1973-1983 (Nyack, New York: Christian and Missionary Alliance, December 1984), p. 18.

<sup>58</sup>Tom Eckblad, "Tips for Urban Church Planters," Urban Mission 1 (1984): 24-29.

<sup>59</sup>Loss cites Ronald Iwasko, Candidate Secretary of the Assemblies of God Foreign Missions Department: "In our psychological testing we employ the Tennessee Self-Concept Scale. Our candidates consistently test from about the 75th to 95th percentile compared to the population norm, placing them far above average in self-acceptance. I suggest that this is true of your candidates as well. Yet, we consistently find that the biggest emotional problem of missionaries is that of a low self image. If that is so, then it follows that somehow the very positive self-image is being destroyed after they become missionaries--and perhaps we ourselves as administrators are a contributing factor." Ronald Iwasko, "Final Report: Assemblies of God Missionary Attitude and Opinion Survey," Directed Research, Trinity Evangelical Divinity School: Deerfield, Ill., p. 19. Cited by Myron Loss, "The Missionary's First Term: Crisis in Self-Esteem" (M. A., Columbia Graduate School of Bible and Missions, 1982), p. 7.



of four missionaries function at satisfactory levels equivalent to their own home culture, that *two of the others limp along at reduced efficiency*, while the fourth leaves the field.<sup>60</sup>

George Gardiner explains the problem by questioning the capacity of individuals who are highly socialized and efficient within one system to make adequate short-term effective transition (or long-term without significant acculturation) into a distinctly different culture.

“...suppose our expert were fully socialized in a culture or sub-culture whose systems of interpersonal relationship structures could be characterized as predominantly rational, universalistic, functionally specific, avoidant, individualistic, and hierarchical. His chances of achieving satisfactory communication would be small if he were sent to an underdeveloped area where the system of interpersonal relationship structures could be characterized as predominantly non-rational, particularistic, functionally diffuse, intimate, responsible, and non-hierarchical.”<sup>61</sup>

Attrition may be the most obvious expression of failure to become acculturated. Less obvious are those who never leave the field, yet who, as Loss suggests, have also failed to acculturate and are functioning at a reduced level of competence or have shifted to a different (perhaps institutionalized) ministry where competence levels are more easily maintained.

### Competence and Problems Faced in Cross-Cultural Life and Ministry

#### Problems of Stress

Problems are a natural part of life. Competence must take into account personal awareness of problems, the capacity to actively and efficiently find solutions, and movement in the direction of growth and increased personal proficiency. *Stress*<sup>62</sup> has been emphasized in many studies as one of the most pervasive and troubling problems faced by missionaries.<sup>63</sup>

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<sup>60</sup>Loss, *ibid.*, pp. 4-9.

<sup>61</sup>George H. Gardner, "Intercultural Communication: Some Observations on the Dynamics of Encounter," New York State Conference on Intercultural Communication, (SUNY at Binghamton, New York: 1974, May 10-12), p. 10.

<sup>62</sup>Chester's study on 200 missionaries in church-planting serving in 11 different countries found that they were under no more stress than people in other helping professions, but he hypothesized that they did not realize the degree of stress to which they and their families were subjected and perhaps were unwilling to recognize the existence of stress factors in their lives. Ray M. Chester, "Stress on Missionary Families Living in 'Other Culture' Situations," *Journal of Psychology and Christianity* 2 (1983): 30-37.

<sup>63</sup>Dr. Don Morrill who served for 25 years as a medical missionary wrote, "Should there be a tendency for us to minimize the problem, it is needful to enumerate without detail some of the uncountable stresses to which missionaries and their families are subject. *Isolation* is high on the list and can assume many forms--physical, spiritual, professional, family cleavage, and more. The *nomad existence* of the family between reassignments, furloughs, and the see-saw of keeping missionary kids in school all demand much thought, physical activity, and emotional stress. *Cultural demands and intrusion* into personal and family privacy, together with *language difficulties* can be emotionally exhausting and lead to deeper problems in relationships. For some workers and their spouses, *living by the faith principle* with its uncertainty (in spite of a determination to trust God for every need) can produce an unrecognized level of stress. In the face of steady, faithful support, however, the meagre financial support level produces much concern and diverted attention. Particularly, in fields where nationalism maintains a high level, the *lack of peer support* may be keenly sensed...especially where there is overt hostility. Sometimes *failure to find a replacement* results in delayed furloughs...with secondary fatigue, uncertainty, and frustration. *Spiritual drainage, lack of obvious spiritual results,*



The "short-term" stress of culture shock turns to long-term "culture stress" which may continue for years.<sup>64</sup> Language stress,<sup>65</sup> role stress,<sup>66</sup> ministry stresses, family stresses (especially related to separation),<sup>67</sup> stresses related to children's education,<sup>68</sup> unique pressures faced by wives,<sup>69</sup> interpersonal relationship and communication stressors,<sup>70</sup> change and displacement,<sup>71</sup> transitional stress,<sup>72</sup> and situational stressors<sup>73</sup> have been discussed in the literature. Fretz, Hunter, and Strauss identify other stressors succinctly:

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*rejection by the national church, or an unfortunate physical accident involving a national* are other not uncommon sources of emotional and spiritual stress. Unless there is appropriate intervention, a massive anxiety build-up can result in the appearance of deeper psychopathology and greater permanent personality scarring." Don R. Morrill, "Debriefing the Missionary Family," unpublished paper, Michigan State University, 1980. Cited by LeRoy N. Johnston, "Understanding the Family Needs of Cross-Cultural Workers," (Mental Health and Missions Study Group, (Ventnor, New Jersey:Overseas Ministries Study Center, Dec. 1984), p. 7. Italicized emphases mine.

<sup>64</sup>See Wayne T. Dye, "Stress-Producing Factors in Cultural Adjustment," Missiology 2 (January 1974): 61-77; and Sally Folger Dye, "Decreasing Fatigue and Illness in Field Work," Missiology 2 (January 1974): 79-109.

<sup>65</sup>See William A. Smalley, "Culture Shock, Language Shock, and the Shock of Self-discovery," Practical Anthropology 10 (1963): 49-56; and William A. Smalley, "Emotional Storm Signals--The Shocks of Culture, Language, Self-Discovery," Evangelical Missions Quarterly 2 (Spring 1966): 518-529.

<sup>66</sup>See Jacob A. Loewen and Anne Loewen, "The "Missionary" Role," in Culture and Human Values: Christian Intervention in Anthropological Perspective William A. Smalley (ed.) The William Carey Library Series on Applied Cultural Anthropology (South Pasadena, CA: William Carey Library, 1975, 2nd ed. 1977), pp. 428-443; and Jacob A. Loewen and Anne Loewen, "Role, Self-Image and Missionary Communication," in Culture and Human Values: Christian Intervention in Anthropological Perspective William A. Smalley (ed.) The William Carey Library Series on Applied Cultural Anthropology (South Pasadena, CA: William Carey Library, 1975, 2nd ed. 1977), pp. 412-427.

<sup>67</sup>Frances J. White, "The Phenomena in Separation and Missionaries," Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1980), pp. 1-17. Frances J. White, "Some Reflections on the Separation Phenomenon Idiosyncratic to the Experience of Missionaries and their Children," Journal of Psychology and Theology 11 (1983): 181-188.

<sup>68</sup>Marjory Foyle, Evangelical Missionary Alliance Conference on the Mental Health of Missionaries (London, England: Unpublished mimeographed report distributed by the Evangelical Missionary Alliance, Evangelical Missionary Alliance, 1984), pp. 2-4.

<sup>69</sup>Kurt Sandholtz, "Executives' Spouses Face Tough Adjustments Overseas," National Business Employment Weekly June 8, 1986: pp. 9-10.

<sup>70</sup>Dorothy Gish, "Sources of Missionary Stress," Journal of Psychology and Theology 11 (1983): 236-242.

<sup>71</sup>David Meech, Reactions to Loss and Displacement in Wycliffe Personnel (Huntington Beach, CA: Wycliffe Bible Translators, Inc., Counseling Department, Wycliffe Bible Translators, Inc., n.d.), pp. 1-11. See also Cecil G. Howard, "How Relocation Abroad Affects Expatriates' Family Life," Personnel Administrator (1980): 71-78.

<sup>72</sup>Laura Mae Gardner, "A Practical Approach to Transitions in Missionary Living," Journal of Psychology and Theology 15 (1987): 342-349. See also Laura Mae Gardner, "Transitions in the Life of a Wycliffe Worker," Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1986), pp. 1-21. Robert L. Eagle, "Positive Possibilities of Mid-Life Transitions," Evangelical Missions Quarterly 20 (1984): 38-47.

<sup>73</sup>Judith Wrubel, Patricia Benner and Richard S. Lazarus, "Social Competence from the Perspective of Stress and Coping," in Social Competence Jeri Dawn Wine and Marti Diane Smye (ed.) (New York: Guilford Press, 1981), pp. 61-99.



The average missionary is faced with a number of unique stresses that can severely tax personal resources, such as change of physical environment, attempts to adapt to language and culture, rapid social and political change, new relationships with nationals, relationships with missionary colleagues, the need for recognition and status, the search for significant and fulfilling work, adjustment of family life, ‘goldfish bowl’ living conditions, and unrealistic expectations acquired before arrival on the field. Problems relating to fellow missionaries are especially severe when the new missionary feels imposed upon by senior missionaries and the constant surveillance of his work and the determination of policies by the inevitable committee organization.<sup>74</sup> Misunderstandings are blown up out of all proportion by those who feel that their independency of life and action is threatened and often curtailed. Older missionaries are often less than understanding in such situations and frequently heighten rather than lessen the tensions through lack of pastoral attitudes. There is often a ‘forced togetherness’ on mission stations and in the work where missionaries are thrown together constantly and where ‘the same people meet again and again on committees’ in which ‘the same issues are raised and wounds can be rubbed raw.’<sup>75</sup>

Dorothy Gish developed a Likert instrument to determine stressors common to the missionary task. A response by 549 missionaries from seven diverse countries and various mission boards identified twenty-three items which caused considerable to great stress for 30% or more of the sample, and three that caused stress to 50% or more of the sample.

TABLE 1: Sources of Stress<sup>76</sup>

ITEMS	% Rating Considerable/ Great Stress	%Rating Great Stress
Confronting others when necessary	54	27
Difficulty of communicating across language-cultural barrier	53	26
Time and effort required to maintain relationships with donors	50	22
Too much work	48	25
Decisions about my work priorities	47	18
Lack of time for personal study of the Word and prayer	37	14
Insufficient progress on my work	36	14
Lack of pastoral care	35	15
Having to make decisions affecting the lives of others	35	15
Lack of confidant with whom I can share freely	34	19
Self-acceptance including self-forgiveness	34	14
Conflicts between my values and those of host culture	34	14
“Gold-fish bowl” existence	33	13
Uncertainty about my future	33	13
Lack of freedom to take time for myself	32	12
Extended family concerns	31	12
Problems associated with frequent moving	31	12
Task orientation at the expense of “servant attitude”	31	11
Lack of recreation and exercise	30	9

<sup>74</sup>Stresses caused by the red-tape, rules, directives, management expectations, and other organizational-based constraints in mission and church structures may be more problematic than is generally acknowledged in the literature.

<sup>75</sup>Roger Fretz, William Hunter and Gary Strauss, "A Relational-Interactional Approach to Missionary Adjustment through Psychodrama," *Mental Health and Missions*, (Pokagon State Park, Angola, Indiana: 1985), p. 3. The authors quote from W. F. Hunter, "A Survey of Psychological Evaluation Programs in the Selection of Overseas Missionary Candidates." (M.A. thesis, Golden Gate Baptist Theological Seminary, Mill Valley, CA, 1965), p. 12.

<sup>76</sup>Dorothy Gish, "Sources of Missionary Stress," *Journal of Psychology and Theology* 11 (1983): p. 240. First person format was retained in this table as it was in the original.



Respondents jotted in further items they would include as causing “considerable to great stress,” listed in Table 2.

TABLE 2 : Sources of Stress (Not Tapped by Likert Scale) <sup>77</sup>

Item	# Responses
1. <u>Children</u>	
Conflict/balance roles of wife/mother and missionary	21
Child-rearing, behaviours and adjustment	17
Children’s education	9
Concern for health and safety	9
Separation from children	10
2. <u>Interpersonal Relationships</u>	
Partner’s/spouse's mental or physical health	9
Lack of privacy	7
Critical, unforgiving attitude of others	6
Uncommunicative, critical partner	5
Personal relationships lacking depth and support	5
Property not properly cared for by other members using it	5
Others coming for advice and help	4
3. <u>Personal Failings [and Needs]</u>	
Singleness	6
Unrealistic self-expectations	6
Feeling of not measuring up	5
Lack of faith, self-discipline	4
High level city noise, traffic jams	4
4. <u>Work Concerns</u>	
Language learning difficulties	6
Risk involved in locating [and working with] the sick	5
Time, opportunity for involvement with nationals	5
Attitude: Amount of productivity=amount of self-worth	4
5. <u>Administrative Concerns</u>	
Filling out forms, questionnaires, and reports	10
Personnel who lack orientation or “do their own thing”	4
Feeling of not ‘being briefed,’ administrative insensitivity	4
6. <u>Finances</u>	
Stressful policies, procedures, and attitudes	5
7. <u>Furlough</u>	
Getting ready while still busy; lack of car and/or house	7

Most of the items identified by the Likert scale and by respondent comments relate to three dimensions of competence: ministry, social and interpersonal interaction, and communication. *The five major stressors relate to two areas: communication and work.* “Confrontation of others” rated the highest stressor (especially by women), followed closely by “cross-cultural communication,” rated more highly by those directly involved in

<sup>77</sup>Dorothy Gish, "Sources of Missionary Stress," Conference on Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1983), pp. 5-6.

“people-ministries” (tribal, educators, church planters, medical people, and those in language study/literacy) than by those serving as support personnel. The time and effort required to maintain communication with home constituency was the third highest stressor. “Too much work” was closely followed by “decisions about work priorities,” “seeing insufficient progress,” and “having to make decisions affecting the lives of others.” Gish remarks that the most striking thing about this study is that results identified as producing the greatest amount of stress are all causes which can be to some degree alleviated by training.<sup>78</sup>

Mary Boppell Johnston did a similar study *circa* 1971 on problems experienced by two groups of sojourners--250 Peace Corps Volunteers (PCVs) who had worked in Asia and 153 graduates of the Missionary Orientation Center (MOC)<sup>79</sup> who were in Asia. Fifty percent or more of the respondents identified personal health, emotional immaturity, and feelings of uselessness as the most critical of their personal problems, while dissatisfaction with the task and language difficulty were viewed as the most serious work-related problems, and cultural maladjustment was identified as the greatest culture-related problem.<sup>80</sup> Over 50% of the PCVs also had problems with lack of commitment, feelings of having insufficient abilities for the task, lack of success, inadequate professional training, difficulty in clarifying the role of their relationship with their national counterparts, problems with separation from their children for their education, with interpersonal stress, and with inefficiency in work.<sup>81</sup>

Ron Iwasko's research on effects of pre-field training on Assemblies of God first-term missionaries from around the world (N=181 out of 406) also attempted to discover the areas producing the greatest stress in missionaries' lives which could potentially be reduced by adequate training. He polled both missionaries and their supervisors. Results showed that supervisors tended to place stress-factors almost twice as high as missionaries placed them. He hypothesized this had to do with the fact that supervisors deal with problems and thus tend to emphasize them, while missionaries tend to downplay stress they are experiencing, especially if they are adequately coping. Table 3 shows the results of the ranking by first-term missionaries (according to the median weight on a 9-point Likert scale).

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<sup>78</sup>Dorothy Gish, "Sources of Missionary Stress," Journal of Psychology and Theology idem., p. 241.

<sup>79</sup>A five-month pre-field training program in New York State maintained by five Protestant denominations. The centre was closed in the late '60s.

<sup>80</sup>Mary Boppell Johnston, "Problems Encountered by Peace Corps Volunteers and Missionaries in Asia," n.d., unpublished manuscript from Hoopes Collection, now in Bennett Collection, Portland, Oregon), pp. 1-12.

<sup>81</sup>Mary Boppell Johnston, "Additional Problems Encountered by Americans Overseas," n.d., unpublished manuscript from Hoopes Collection, now in Bennett Collection, Portland, Oregon), pp. 1-12.



TABLE 3 : Tension-Producing Factors on the Field  
as Judged by Missionaries<sup>82</sup>

Rank	Factor	N	Median
1	Foreign language	169	5.46
2	Philosophy/Practice of financial support for nationals	144	4.23
3	Relationship with other missionaries	173	3.71
4	Time management	164	3.59
5	Journalistic skills	154	3.44
6	Financial record-keeping	164	3.42
7	Adaptation to Culture	170	3.35
8	Philosophy of construction for nationals	126	3.30
9	Ability to plan, organize, formulate strategy	161	3.17
10	Techniques of financial management	158	2.92
11	Building construction procedures	124	2.89
12	Leadership skills	158	2.86
13	Relationship with nationals in general	169	2.63
14	Interest/abilities in job assignment	151	2.62
15	Fundraising	148	2.55
16	Philosophy/theology of missions	155	2.52
17	Managing a household on the field	163	2.46
18	Relationships with national pastors/leaders	166	2.35
19	Meal preparation on the field	156	2.31
20	Speaking ability (unrelated to language learning)	159	2.24
21	Relationships with national Christians	167	2.18
22	First Aid	157	1.86
23	Relationship with the Lord [spiritual dynamics]	171	1.80
24	Health and hygiene	164	1.65
25	Relationship with children	158	1.59

Both missionaries and their supervisors placed language skills at the top of the stress-producing factors, well above the others on the median. Secondly, conflict between understandings of indigenous work and the practice of providing financial support for nationals and their programs (as well as potentially feeling “used” by nationals for the money missionaries can provide) resulted in stress. The third most difficult area arises from relationships with other missionaries (an issue which field supervisors placed tenth on their list!). Interpersonal stress repeatedly arises in missionary literature as a problem missionaries contend with.

Interestingly, supervisors placed problems of feeling self-worth and accomplishment at the third level (an item which had not been included on the missionaries’ list).<sup>83</sup> They also ranked culture adjustment fourth, while missionaries ranked it as seventh. Most of the other

<sup>82</sup>R.A. Iwasko, "An Integrated Program for Training First-term Missionaries of the Assemblies of God" (Unpublished D.Miss. dissertation, Trinity Evangelical Divinity School, 1984), p. 101.

<sup>83</sup>Feelings of low self-worth may be a real problem, since so much of the first term is geared to learning language and culture, with little to show by individuals who (in most cases) have come from successful pastorates in North America, and are conscious of supporters expecting results. Failure to produce expected results may bring feelings of lessened self-esteem.



areas of tension had to do with mission philosophies or policies, with the job at hand, or with church-mission or national church-missionary relationships.<sup>84</sup>

Using Cooper's six major areas of occupational stress,<sup>85</sup> Donovan identified the following as situational factors that cause difficulty for the missionary task. First, *poor physical working conditions* can result in inefficiency, dissatisfaction, frustration, and other problems. Second, *work overload*, mentioned by other researchers, can result in stress-related symptoms such as lowered self-esteem and low motivation, while, third, *under-stimulating work* (i.e. below one's levels of expertise) can result in loss of professional self-esteem. Fourth in the list was *physical danger* and fifth, "*person-environment fit*," that is, the type of interaction between a person's characteristics, traits, and capacities and the particular environmental situation and stressors. Where this person-environment fit is unsatisfactory, anxiety, dissatisfaction, and depression can result. Sixth, a common problem and according to Cooper one of the most problematic stress-producing areas, is *role ambiguity*. Among missionaries this may occur when the new missionary is left very much on his or her own to create a ministry, no job description has been made, there is inadequate supervision, there are too many conflicting ministry demands and interruptions on the task, or demands arise to do jobs that are beyond one's skills. Role ambiguity often includes over-promotion (given responsibilities beyond one's abilities), under-promotion (insufficient responsibility), advancement beyond experience or ability, and lack of job security (since the missionary is there to develop nationals to take over his job).<sup>86</sup>

In order to accomplish his task of handing over responsibility to the church, the missionary may find it necessary to travel backwards in terms of development of his own career. Even though he recognizes this to be part of the cost of his calling, it is still painful. He may need to hand over the jobs he does best to people less well equipped to do them; as he reaches the stage in his own life when his experience and maturity fit him to contribute most, he often has to pull back and not only stand on the sidelines, but also accept direction from those who were formerly his pupils; the church may not recognize his capacities; after years of total commitment to the task, he may find himself unaccountably misunderstood and even rejected; he does not even know whether his work permit will be renewed when the time comes; there is no prospect of promotion since national Christians must take leadership positions as they are able to handle them. The missionary knows that he comes as a servant prepared to wash feet in the deepest sense, and yet may have a continuing inner struggle with questions surrounding his personal identity and self-esteem."<sup>87</sup>

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<sup>84</sup>Ibid., pp. 99-106.

<sup>85</sup>C. L. Cooper, "Identifying Stressors at Work: Research Paper Developments," Journal of Psychosomatic Research, 27 (1983): 369.

<sup>86</sup>This of course should be an understood given. The missionary exists to develop the church and the leadership of the church so that they can stand and grow on their own within their cultural, sociological, and political context. "Servant-ministry" is not psychologically easy, since self-effacement is not natural and calls for clear vision and sensitive spirituality.

<sup>87</sup>Ibid, p. 13.



Citing Cooper and Marshall's <sup>88</sup> assessment that poor relationships with superiors and workmates (including "low trust, low supportiveness, and low interest in listening to and trying to deal with problems") lead to role ambiguity, inadequate communication, and low job satisfaction, Donovan also makes reference to Nouwen's "silence from above" <sup>89</sup> characteristic of religious organizations, wherein high task-orientation and low people-orientation result more in communication of dissatisfaction than of encouragement from those in authority. These combined with inadequate consultation, organizational restrictions on behaviour, and little participation in decision-making can result in irritation, reduced self-esteem, shortened job satisfaction, lowered motivation, and in some cases ill-health. <sup>90</sup>

### **General Problems Experienced by Missionaries**

Peter C. Hill of the Christian and Missionary Alliance (C&MA) designed a study to identify the spiritual, physical, and psychological needs of missionaries and to attempt to determine what efforts were being made to meet those needs. *See Table 4 (next page)*. The questionnaire included 90 questions based on a measure of self-esteem, a measure of perceived social distance from nationals, a general "satisfaction with life" scale, and a needs assessment scale designed from pilot data gathered previously by LeRoy N. Johnston. Two hundred and forty-seven C&MA missionaries from fields around the world rank ordered the Needs Assessment Scale indicating the extent of personal need on a five point Likert scale.<sup>91</sup> The following listing identifies needs assessed at a 4 or 5 point level indicating great or major need.

All missionaries (husbands, wives, singles) rated *spiritual needs* the highest, although all felt there was adequate time for devotional life. The questionnaire also indicated that missionaries polled were generally confident about their vocational competence, men more confident than women, and singles more confident than married women. Even so, it is interesting to note that ministry skills training, continued language learning, and vocational training/continuing education ranked 3rd, 5th, and 7th in terms of needs.

Peter Hill did a follow-up study on 90 other C&MA missionaries in 1986 with nearly the same results.<sup>92</sup> Spiritual renewal remained a primary concern of missionaries, followed

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<sup>88</sup>C.L. Cooper and J. Marshall, "Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Ill Health," Journal of Occupational Psychology 49 (1976): p. 11.

<sup>89</sup>H. J. Nouwen, Intimacy (Notre Dame, Indiana: Fides Publishers Inc., 1969).

<sup>90</sup>Donovan, *idem.*, p. 14-15.

<sup>91</sup>1="no need at all" to 5="a major need."

<sup>92</sup>Peter C. Hill, Final Report, Assessing the Needs of Missionaries: A Follow-up Study (Grove City, New Jersey: Private report to the Christian and Missionary Alliance Department of Overseas Ministries, 1986), pp. 1-48.



TABLE 4: Priority of Needs<sup>93</sup>

Rank	Issue	Ave. Response	% Indicating Major Need
1	spiritual renewal	3.76	61
2	personal devotional time	3.23	44
3	ministry skill training	3.12	38
4	*family time	3.12	35
5	continuing language training	3.09	41
6	time management	3.03	39
7	continuing education/vocational training	3.00	40
8	interpersonal relationships among missionaries	2.94	31
9	personnel needs	2.89	30
10	*MK adjustment when returning to North America	2.88	31
11	field organization	2.82	28
12	too heavy a workload	2.77	29
13	knowing where I fit in with missions purpose	2.72	29
14	formal evaluation of ministry	2.70	28
15	needing a job description	2.60	28
16	relationships with nationals	2.58	22
17	finances	2.58	23
18	*MK adjustment at boarding school	2.57	22
19	career assessment	2.54	21
20	adjustment to new responsibilities	2.51	20
21	improvement in communications with Dept. of Overseas Min.	2.45	19
22	*immediate family relationships	2.42	19
23	greater accountability for work	2.40	17
24	*family privacy	2.30	17
25	depression/discouragement	2.26	16
26	*marriage relationships	2.25	14
27	extended family relationships	2.18	13
28	career guidance	1.93	12
29	living conditions/housing	1.83	8

\*answered by married respondents only

(on a weighted basis) by ministry skills training (men and singles most concerned about this need). First and second term missionaries perceived highest needs to be spiritual renewal, interpersonal relationships, time management, depression/discouragement, career guidance, continuing language learning, and personal devotional time.

Problems Experienced by Single Missionaries

Special needs experienced by single (in most cases women) missionaries include 1) the need for supportive relationships,<sup>94</sup> 2) satisfactory living conditions, 3) strong self-image

<sup>93</sup>Peter C. Hill, Final Report: Assessing the Needs of Missionaries (Nyack, New York: Private report to the Christian and Missionary Alliance Department of Overseas Ministries, 1984), p. 49. This table is written as in the original report.

<sup>94</sup>For further material on support structures see T.L. Albrecht and Mara B. Adelman, "Social Support and Life Stress: New Directions for Communication Research," Human Communication Research 11 (1984): 3-32. Gary Fontaine, "Roles of Social Support Systems in Overseas Relocation: Implications for Intercultural Training," International Journal of Intercultural Relations 10 (1986): 361-378. B. J. Hirsch, "Natural Support Systems and Coping with Major Life Changes," American Journal of Psychology 8 (1980): 159-172. M. Killilea, Mutual Help Organizations: Interpretations in the Literature, (New York: Grune and Stratton, 1976).



and career image, and 4) the establishment of "special category-person" for single women in a culture that does not have a category for such. In Donovan's study of 57 singles in the Asia Pacific Christian Mission singles identified the following needs as their greatest:

- |  |                   |
|--|-------------------|
| 1. To have a trusted friend (need for supportive relationship)       | 61%               |
| 2. For acceptance as a full member of the team (career-significance) | 36%               |
| 3. To live a balanced life   | 36%               |
| 4. For satisfactory living arrangements                              | 33%               |
| 5. To participate in decision-making                                 | 17% <sup>95</sup> |

In the same study single missionaries also identified the hardest things they had to face during their missionary career as 1) faulty relationships with fellow missionaries (50%), 2) unsatisfactory living conditions (35%), 3) being alone (33%), and 4) the views nationals and missionaries had of women (19%). The study also found that 58% found the workload too heavy (due to staff shortages), a significant number desired more help and supervision from mission leadership but *lacked encouragement to develop their potential*. Over half were aware of a gap between performance and expectation, while feelings of failure and inadequacy were reported by many who had been over twenty years on the field, indicating a need for continuing education and training.

Forty percent of first termers in the singles' study reported decline in self-esteem; forty-five percent felt they had insufficient time for language and culture study; seventeen percent felt inadequately trained for the job. Thirty-eight percent were troubled by feelings of not having lived up to their supporters' (imagined) expectations; forty-three percent were constantly tired; twenty-five percent were aware of a change in their disposition for the worse; and forty percent felt resentment about various things. Thirty percent felt need for greater encouragement that what they were doing was worthwhile. Finally, a full seventy percent had experienced pain from gossip and criticism.<sup>96</sup>

### **Problems Experienced by Families**

Families also have special needs. Kruckeberg and Stafford interviewed missionary parents and found that 79 percent desired help in the following areas:

1. Communication skills between family members
2. Coping with furlough and travel
3. Time management and other resources
4. Enriching family life through leisure activities
5. Helping children adjust to new situations.<sup>97</sup>

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<sup>95</sup>K. Donovan, "The Special Needs of Single Missionaries," Asia Pacific Christian Mission, General Executive Conference, 1984), p. 4.

<sup>96</sup>Ibid., pp. 8-10.

<sup>97</sup>J. Kruckeberg and A. Stafford, "The Missionary's Need of Family Life Training," Evangelical Missions Quarterly 17 (1981): 163-170



Peter Hill's research, cited earlier, found that 25.7 percent of married couples identified communication breakdown as their single biggest difficulty in their marriage, followed by 22.1% for lack of private time together. With regard to their children, missionary families tend to identify their primary "sacrifice" as separation from children for the purpose of schooling.<sup>98</sup> The single biggest difficulties in relationships with children included time limitations/work demands (28.5%) and separation (17.4%), followed by personality differences or discipline problems (11.8%). Their biggest concerns for their children included spiritual development (46.9%) followed by social/emotional adjustment (11.3%).<sup>99</sup>

All of these needs experienced by missionaries can be summed up, as John Powell has, under five basic components:<sup>100</sup>

1. Issues related to need for, confusion about, or frustration regarding *mastery* (the need for sense of control),
2. Issues related to sense of *belonging*, identification with and ownership of mission program and being part of the national church,
3. Issues involving *need for recognition* as a person of worth who is making a contribution, acknowledgement of oneself in a personal sense,
4. Issues regarding *sense of hope*, spiritual reality, and the working of God in one's life.
5. Issues involving *sense of reality* (or distortion of reality) related to high external or internal stress affecting one's sense of perception.<sup>101</sup>

He goes on to explain how these relate to the multiple concerns often expressed:

In the form of presenting issues they may be typically experienced as: fatigue (mental and physical), lack of privacy, little time for personal devotion and prayer, disillusionment with co-workers, open conflict with mission policy, issues of

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<sup>98</sup>White has identified separation as the root of many missionary struggles. Frances J. White, "The Phenomena in Separation and Missionaries," *Mental Health and Missions*, (Pokagon State Park, Angola, Indiana: 1980), pp. 1-17. Frequent father absence because of work demands is also psychologically hard on family life. For further information on the psychological damage caused by father absence see study done by Don M. Lagrone, "The Military Family Syndrome," *American Journal of Psychiatry* 135 (1978): 1040-1043.

<sup>99</sup>Peter C. Hill, *Final Report: Assessing the Needs of Missionaries*, op cit., pp. 80-82.

<sup>100</sup>These categories appear to be related to Seeman's five facets of alienation: **powerlessness** (lacking adequate input in the decision-making process), **meaninglessness** (loss of meaning and purpose identification), **normlessness** (inconsistency between one's value system and demands of the situation, often true in a new cultural context), **isolation**, and **estrangement** (loss of sense of accomplishment, achievement, goal orientation, identity, purpose perspectives). See M. Seeman, "On the Meaning of Alienation," *American Sociological Review*, 24 (1959): 783-791.

<sup>101</sup>To these should be added "issues related to **sense of empowerment**," that is, the actual enablement for ministry that has impact in the growth and development of the church, an enablement which can only be given by the Holy Spirit of God. This is because ministry as a missionary is related to eternal realities, to the Church, and to the Kingdom of God, and therefore requires the supernatural enablement of God. Anything else may be "busy work" and can lead to discouragement or a sense of futility.



authority, loneliness, job dissatisfaction, interpersonal conflict, anger with nationals, anxiety about family members at home, experience of little concern from sending church, feeling that no one understands what it's *really* like being here, concerns over children, ineffectiveness in evangelism, issues of separation, and relationship with the home church, to mention a few. In addition, concerns about relationships, sense of self-worth, questions about the reality of the sense of call to mission service, or general ability to cope may also be reflections of problems or concerns brought to the field and which surface more readily under the normal stresses of mission service.<sup>102</sup>

Training for cross-cultural ministry competence and issues of competence must take these problem areas into account, enabling missionaries to cope with them and actually turn them into means for personal growth and development.

### Competence and Selection of Missionaries

In light of both the critical role of individuals in attaining success or contributing to failure in cross-cultural ministry and the enormous investments made in time and money to prepare and send individuals and families overseas, no organization wants to see attrition or reduced competence on the part of its personnel.<sup>103</sup> A great deal of research has been done on selection procedures and processes for cross-cultural work.<sup>104</sup> Because the subject is so

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<sup>102</sup>John Powell, "Some Approaches to Brief Psychotherapeutic Intervention with Missionaries on the Field," unpublished paper, Michigan State University, 1980. Cited by LeRoy N. Johnston, "Understanding the Family Needs of Cross-Cultural Workers," (Mental Health and Missions Study Group, (Ventnor, New Jersey:Overseas Ministries Study Center, Dec. 1984), pp. 4,5.

<sup>103</sup>C.f. Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. 1, Issues in Theory and Design (New York, NY: Pergamon Press, Inc., 1983) p. 155.

<sup>104</sup>For some of these see the following:

AFS International/Intercultural Programs, Inc. "Assessing the Candidate," Theory Into Practice Series, No. 1 (1984): 1-12. James C. Baker and John M. Ivancevich, "The Assignment of American Executives Abroad: Systematic, Haphazard, or Chaotic," California Management Review 13 (1971): 39-41. Lertlak Burusphat, "Some Problems Related to the Training Process," Communication Services, United Nations Development Support, 1977), pp. 1-3. Michael A. Conway, "Reducing Expatriate Failure Rates," Personnel Administrator (1984): 31-32, 37-38. Charles B. Cureton, "Missionary Fit: A Criterion-Related Model," Journal of Psychology and Theology 11 (1983): 196-202.

Perry L. Draper, "Evaluating Candidates for Missionary Service," (Conference on Mental Health and Missions, Pokagon State Park, Angola, Indiana: 1980), pp. 1-13. Larry N. Ferguson, et al., "Candidate Selection Criteria: A Survey," Journal of Psychology and Theology 11 (1983): 243-250. Marjory Foyle, "How to Choose the Right Missionary," Evangelical Missions Quarterly (1986): 196-204. Frank Hawes, Adapting the Assessment Centre Method as a Procedure in the Selection of Cooperants For Assignment Overseas(Ottawa, Canada: Unpublished mimeographed manuscript, Canadian International Development Agency, 1977), pp. 1-31.

Frank Hawes, Validating the Selection Weekend Method in the Assessment of Candidates for Overseas Assignment (Ottawa: Canadian International Development Agency (CIDA), Canadian International Development Agency (CIDA), 1977), pp. 1-34. Edwin L. Miller, "The International Selection Decision: A Study of some Dimensions of Managerial Behavior in the Selection Decision Process," Academy of Management Journal 16 (1973): 239-252. Hollis W. Peter and Edwin R. Henry, "Steps to Better Selection and Training for Overseas Jobs," Personnel (1962): 18-25. H. Anthony Stern, "Selection of Overseas Personnel," Personnel Journal 45 (1966): 224-228.



large, only factors related specifically to competence which are not dealt with in Chapter Two will be considered here.

Tung points out that research has primarily focused on generating lists of criteria, personal qualifications, and personality characteristics for identifying personnel most likely to be effective. She also points out that research has "failed to integrate these variables into a comprehensive framework for conceptualizing and analyzing the selection process."<sup>105</sup> Theorists and researchers are increasingly suggesting a "contingency approach" which assumes that "depending upon the country of foreign assignment and the task that is to be performed, the selection process should *attribute varying importance to the factors* (e.g. technical competence, relational abilities, etc.) *that contribute to success or failure on the job* ; and candidates for different assignments should undergo different types of training programs to prepare them for such cross-cultural encounters."<sup>106</sup> This calls for a flexible approach, balancing the individual's traits and competencies against the demands of the task and the realities of the cross-cultural environment, which will vary from one area of the world to another and may vary even within the context of a single country.

Hays likewise insists that three categories of variables must be taken into consideration: 1) the *environment* (that is, factors associated with the specific national environment to which an expatriate may be assigned), 2) the *task* (or factors associated with the specific job to be performed), and 3) the *individual* (factors associated with the personality traits, strengths, and situation of the person being considered for expatriate assignment, including family and marital realities).<sup>107</sup>

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Michael F. Tucker, Screening and Selection for Overseas Assignment: Assessment and recommendations to the U.S. Navy (Denver, Colorado: The Center for Research and Education, 1974), pp. 1-108. Rosalie L. Tung, "Selection and Training of Personnel for Overseas Assignments," Columbia Journal of World Business (1981): 68-75. A.T.M. Wilson, "Recruitment and Selection for Work in Foreign Cultures," Human Relations 14 (1961): 3-21. Ted M. I. Yellen and Sandra J. Mumford, The Cross-Cultural Interaction Inventory: Development of Overseas Criterion Measures and Items that Differentiate between Successful and Unsuccessful Adjusters (San Diego, CA: Navy Personnel Research and Development Center, U.S. Navy Personnel Research and Development Center, San Diego, California 92152, 1975), pp. 1-67. Yoram Zeira and Moshe Banai, "Present and Desired Methods of Selecting Expatriate Managers for International Assignments," Personnel Review 13 (1984): 29-35.

<sup>105</sup>Rosalie L. Tung, "Selection and Training of Personnel for Overseas Assignments," Columbia Journal of World Business (1981): p. 68. For an extensive discussion on this see Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. 1, Issues in Theory and Design (New York, NY: Pergamon Press, Inc., 1983) pp. 155-175.

<sup>106</sup>Tung, *ibid.*

<sup>107</sup>Richard D. Hays, "Expatriate Selection: Insuring Success and Avoiding Failure," Journal of International Business Studies 5 (1974): 27-28.



Utilizing somewhat the same three categories, Howard's model of assessment suggests the following competencies:

1. *Position*: ability to handle position responsibilities with ease, to perform diverse functional responsibilities, to successfully perform even without expert advice, to produce desired results without supervision, and to make decisions quickly
2. *Management*: ability to plan effectively and economically, to organize, to lead and inspire confidence in people, to motivate people, to communicate effectively
3. *Personal*: character, interest in "overseasmanship," understanding of mankind, emotional stability, open-mindedness and objectivity, analytical mind, tolerance and patience, liking for people of varied backgrounds, resourcefulness and diplomacy, mental and physical health, wife's [and it could be added, family's] cooperation and temperament
4. *Environment*: flexibility toward American outlook and way of life, flexibility to diverse cultural, economic, political conditions, etc., flexibility for solving problems in a diverse cultural framework, ability to predict strategic economic and political changes, linguistic ability, and flexibility to foods.<sup>108</sup>

Kealey and Rubin, recognizing the same needs, state that selection must include a larger, more comprehensive framework that is more criterion-referenced: 1) identification of necessary competencies an individual must possess,<sup>109</sup> 2) definitions of *success*, 3) profile of the job, 4) profile of the culture, and 5) identification of what data is appropriate for assessing the competency and skill levels of potential overseas personnel.<sup>110</sup> Production of such a framework is a time consuming and laborious effort, something which many understaffed missions personnel offices will not take the time for. Skarsten and Moorehouse point out that some missions accept people on the basis of the mission's past experience with little or no research on the extent to which their selection process works out for the field, while others run extensive programs but don't know what critical factors need to be assessed.<sup>111</sup> Few include all five items from Kealey and Ruben's framework.<sup>112</sup>

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<sup>108</sup>Cecil G. Howard, "Model for the Design of a Selection Program for Multinational Executives," Public Personnel Management (1974): p. 143

<sup>109</sup>Kane would place such competencies in five major areas: physical qualifications, academic qualifications, vocational qualifications, psychological qualifications, and spiritual qualifications. J. Herbert Kane, The Making of a Missionary, (Grand Rapids, MI: Baker, 1975), pp. 59-70.

<sup>110</sup>Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," *idem.*, pp. 171-172.

<sup>111</sup>Stan Skarsten and Marian Morehouse, "Critical Factors in Missionary Assessment and Placement," Conference: Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1981), pp. 2-3.

<sup>112</sup>Attempts to identify necessary qualifications (the first point in the framework) tends to be quite thorough among missions (even if much deselection occurs automatically through the length and



Williams and Kliever refer to seven common methods used by missions in assessing candidates for selection: 1) interviews, 2) references, 3) ratings, 4) life histories, 5) simulated situations, 6) psychological self-reports, and 7) individually administered psychological tests and projective techniques.<sup>113</sup> Michler has suggested that the following assessment criterion questions be part of any selection process:<sup>114</sup>

1. How mature is the candidate's motivation?
2. What are his inner resources for meeting unforeseen situations and for coping with possible tensions, pressures, and anxieties?
3. How realistic is he in his thinking and attitudes?
4. How adaptable are his thinking and attitudes? Does there seem to be good balance in stability and adaptability?
5. How about the candidate's self-awareness? Is he able to accept himself as he is and grow from there?
6. Can he live and work effectively with others in a team? Does he demonstrate good sensitivity and tact in dealing with others?
7. Can the candidate work most effectively in a structured or relatively unstructured situation?
8. What seems to be the candidate's potential for success for missionary service in terms of intellectual qualities, industriousness, initiative, imagination, and other desirable qualities?
9. In the case of married couples, how about their marital adjustment?<sup>115</sup>

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rigour of the selection process, leaving the most determined, and usually the most qualified, at the end of the "pipeline"). Many boards use a preliminary questionnaire which forces applicants to deal with initial motivations. A more detailed questionnaire tends to follow, which also requests references, doctrinal statement, school records, extracurricular interests, and Christian service activities. The individual's character references and activities on campus may be sought of student deans and counsellors. Medical exams and work records are asked for. References are contacted and information relative to the candidate's interpersonal relationships, emotional maturity, strengths, weaknesses, abilities, and limitations is gathered. If problems are found at this level the application process is often terminated.

If all has proceeded well to this point the individual will be invited to Candidate Orientation (Candidate School) which is usually a structured two to four week assessment and training process (shorter for some missions, as long as four months for others, from one year to eighteen months with New Tribes Mission). It is at this point that some types of psychological assessment may take place, the most common types of instruments used being the T-JTA and the MMPI. Interviews take place with psychologists, mission administrators, and often the mission board. Missions that do not use psychological tests may have in-depth interviews using professional or non-professional counselling staff. Depending on findings, candidates may be directly accepted, required to get further experience in pastoral ministry, or asked to go to pre-field training programs such as Missionary Internship in Farmington, Michigan.

<sup>113</sup>Donald Williams and Dean Kliever, "Perspectives on Psychological Assessment of Candidates for Cross-Cultural Christian Missions," Convention of the Evangelical Foreign Missions Association, (Kansas City, Missouri: March 1980). See also Joyce M. Thrasher, "Survey of Responses of Twenty Mission Board Leaders to a Questionnaire Regarding Existent and Potential Missions' Problems," Conference on Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1982), pp. 1-11.

<sup>114</sup>For another interview worksheet that covers categories such as motivation, health, language ability, family considerations, resourcefulness and initiative, adaptability, career planning, and financial consideration (from a business perspective) see John R. Meyer, Michael Elia and Jo Satloff, ed., Managing Human Resources: Productivity, Quality of Work Life, Profits, (New York: McGraw-Hill, Inc., 1986), p. 591.

<sup>115</sup>Michler's personal communication to one of the authors, William Hunter. Roger Fretz, William Hunter and Gary Strauss, "A Relational-Interactional Approach to Missionary Adjustment



These questions cover traits pertaining to maturity, motivation, coping resources, realism, adaptability, stability, self-awareness, self-acceptance, need for structure, intelligence, industriousness, initiative, imagination, and marital adjustment.<sup>116</sup>

Elements that constitute healthy family functioning need to be assessed when families are in the process of selection. Fisher, Giblin, and Regas' survey of 310 therapists and educators who work with families resulted in the identification of eight aspects (under three categories) associated with healthy family life. *Communication*: 1) Consideration of partner and one's self as important even in disagreement, 2) attentive listening to partner, 3) speaking for self rather than the other, 4) expressing feelings openly, clearly, but graciously. *Adaptability*: 1) able to generate new ideas and change patterns of behaviour in new situations, and 2) family members able to successfully negotiate differences (i.e. reach a decision that is acceptable to all). *Cohesion*: 1) "family members nurture and validate each other verbally and non-verbally with regard to emotional needs," and 2) "family members feel security, safety, and trust in one another's presence."<sup>117</sup> An effective selection process will attempt to discover the extent to which these eight elements are part of family life if future attrition and/or problems are to be forestalled.

Marjory Foyle suggests that the following areas must be included in assessment of missionary candidates: 1) sexual life (issues related to homosexuality, extramarital sexual relationships, and heterosexual relationships in single persons which could have significant implications in the country to which the individual is going), 2) problems faced by singles, 3) marital problems, 4) occult experiences, 5) previous drug involvement, and 6) recent broken love affairs or recent bereavement which could put additional stress on an individual facing the rigours of culture entry. She also suggests keeping watch for applicants who are over-rigid, immature, over-aggressive, or over-mystical.<sup>118</sup>

All of this is needful, but there is little in mission literature indicating how (or even if) missions move from trait-centred assessments to field-fit criteria. Organizations like the CIDA, VSO, Peace Corps and other volunteer organizations that send technical experts

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through Psychodrama," Conference on Mental Health and Missions, (Pokagon State Park, Angola, Indiana: 1985), p. 4.

<sup>116</sup>Anthony Stern lists important considerations from the organization's point of view which are almost parallel: 1) motivation, 2) competence, 3) character, 4) responsibility, 5) likelihood of success, 6) flexibility in the face of changes and unexpected situations, 7) social accommodation, 8) ability to learn, 9) cooperativeness, 10) initiative and creativity, 11) settled personal life, and 12) wholesome attitudes to the organization. H. Anthony Stern, "Selection of Overseas Personnel," *Personnel Journal* 45 (1966): p. 224.

<sup>117</sup>B. Fisher, P. Giblin and S. Regan, "Healthy Family Functioning/Goals of Family Therapy II: An Assessment of What Therapists Say and Do," *The American Journal of Family Therapy* 11 (1983): p. 46.

<sup>118</sup>Marjory Foyle, "How to Choose the Right Missionary," *Evangelical Missions Quarterly* (1986): 201-203.



overseas have moved to both “trait” and “criterion-referenced” selection processes, correlating individual skills with job requirements and personal traits with cultural expectations and characteristics.<sup>119</sup>

Criterion-related validity refers to the effectiveness of a test in predicting an individual's behaviour in specified situations (Anastasi, 1982<sup>120</sup>). This is done by comparing performance on the test with an independent measure of validity, that is a criterion. For several years the prevalent opinion in personal psychology was that selection tests should undergo full scale validation against local criteria of on-the-job performance. Specific procedures for such criterion-related validation would include (a) conducting a job analysis for identifying the major job elements and specifying the corresponding skills, knowledge, values, perceptions, and personality required by the job; (b) selecting or constructing a test to assess these characteristics; (c) correlating the test with appropriate criteria of job performance; and (d) formulating a strategy for personnel decisions (Anastasi, 1982).<sup>121</sup>

Mission-associated psychologists have acknowledged that there is a marked lack of criterion-related assessment testing.<sup>122</sup> The clinical approach (based on norm-referenced psychological evaluations) seldom correlates either to the uniqueness of the mission or to the specific competencies required for success in the unique task within the cross-cultural context. William Pollock has criticized the mix of “jury selection” (i.e. board and individual interview<sup>123</sup>) with “hard-nosed” psychological testing in selection as “mismatching selection

<sup>119</sup>N. Bramble, "Criterion-Referenced Training," Peace Corps Program and Training Journal 1 (1973): 2-138.

<sup>120</sup>Drawn from A. Anastasi, Psychological Testing (New York: Collier, 1982).

<sup>121</sup>Charles B. Cureton, "Missionary Fit: A Criterion-Related Model," Journal of Psychology and Theology 11 (1983): p. 196.

<sup>122</sup>Williams and Kliever suggested two main deficits in selection processes: 1) failure to select persons by utilizing definite job descriptions, and 2) lack of validation of selection and assessment procedures because of a lack of explicit criteria for success. Donald E. Williams and Dean Kliever, "Perspectives on Psychological Assessment of Candidates for Cross-Cultural Christian Missions," op. cit.

<sup>123</sup>Mayfield's review of the literature and empirical research pertaining to the interview and its effectiveness in the selection process (from 1915-1964) came to the following conclusions:

1. Unstructured interviews have lower reliability.
2. Validity, though generally low, was higher when a team approach was used.
3. Interviewer bias was clearly in evidence. Examples of empirically demonstrated bias were given:
  - a. The interviewer's impressions were more likely to change from favourable to unfavourable than vice versa. The active interview was a search for negative data.
  - b. Interviewers tended to make their decisions early in an unstructured interview. The decision was more likely based on manner, facial expression, and personal appearance obtained during the interview.
  - c. The attitude of the interviewer affected how he interpreted what the interviewee said.
  - d. Interviewers give different weight to the same material obtained. The same response item could be interpreted as extremely favourable by some and as extremely unfavourable by other interviewers.
4. In the usual unstructured interview, the interviewer talks the most.

Mayfield suggested that the structured interview was the best because raters had the same information for comparison so that more equal weighting of information was possible. His general conclusion, however, was that *for selection the interview is of little value*. See E. C. Mayfield, "The



criteria influenced by religious-humanistic-developmental psychologies with selection procedures influenced by secular, objective, trait-based psychologies used traditionally by industrial management.”<sup>124</sup> As Cureton points out, “clearly identifiable relationships between missionary selection profiles” as currently undertaken and “later on-the-job performance have yet to be satisfactorily established.”<sup>125</sup>

It should be obvious that if a mission desires to choose an individual who will be effective, it must first determine what an effective missionary *knows, is, and does*. In 1983 a conference of forty-four mental health professionals, mission leaders, and professionals with missionary personnel experience met at Pokagan State Park, Indiana to try to produce a model with just such specific criteria representing successful missionary service. They utilized three instruments, the Scales of Worker Functions (to provide comparison between the three groups on minimal job performance in the areas of “people,” “data,” “things,” “mathematics,” “language,” and “reasoning”), the Successful Employment Profile (SEP) (to compare the three groups rankings of 27 personal and demographic traits necessary for successful missionary service), and the Osgood Semantic Differential (to compare the three groups perceptions of 20 bi-polar adjectives with regard to their usefulness in differentiating successful and unsuccessful missionaries). All three groups produced identical descriptions on the Scale of Worker Functions. Correlations on 27 Successful Employment Profile rankings (SEP) were .90 or higher ( $p < .01$ ), showing a high level of congruence. Furthermore, all three identified 18 of the 20 paired semantic differentials as significant for differentiating between potentially successful and unsuccessful missionaries. The minimal job performance skills independently agreed on by all three groups included the ability to:

(a) to influence others in favour of a point of view by verbal communications and by demonstrations; (b) to gather, collate, and classify information about data, people, and things; (c) to start, stop, control, and adjust various machines and equipment designed to help them accomplish their task; (d) to make arithmetic calculations involving fractions, decimals, and percentages; (e) to use language effectively in writing business correspondence, understand technical manuals, and verbal instructions, interviewing applicants to determine the work best suited for their abilities and experiences, and conducting some opinion research surveys involving stratified samples of a population and (f) to devise a system of interrelated procedures applicable to solving practical everyday problems and

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Selection Interview--A Reevaluation of Published Research," Personnel Psychology 17 (1964): 239-260.

Sawyer's review of 45 studies of Peace Corps selection concluded that *the interview was a poor basis for selection of personnel*. J. Sawyer, "Measurement and Prediction, Clinical and Statistical," Psychological Bulletin 66 (1966): 178-200.

<sup>124</sup>William Pollock, "A Theoretical Consideration of Selection for Training for Ministry," Journal of Psychology and Theology 14 (1986): 125-126.

<sup>125</sup>Cureton, *idem*.



dealing with a variety of concrete variables and situations where only limited standardization exists.<sup>126</sup>

Unfortunately, much of this description sounds like it came out of the manual devised for interpreting the Successful Employment Profile. These "criteria" are generalized competencies that could be applicable to any job, secular or otherwise. There are no clear criteria here uniquely related to cross-cultural life and ministry. The conference was not successful at producing a criterion-based model, except in a very generalized way. Further attempts to develop criteria unique to cross-cultural missionary work do not appear to have been made by any research groups or missions apart from in-house standards devised by very specialized missions such as Wycliffe Bible Translators.<sup>127</sup>

### Competence and The Question of the Adequacy of Training

Finally, the question of the adequacy and role of missionary training needs to be raised. Hill's study, previously referred to, found that over fifty percent of missionaries polled desired on-going ministry training, language training, and continuing education. The longer missionaries served, the more they seemed to sense the need. Even desire for deepened Bible knowledge on the part of many missionaries has been found.<sup>128</sup> His study further found that 15.1% would like to have had more practical, less theoretical pre-field training in College and Seminary, 12.4% desired to further their education, 10.7% felt need for more anthropology and felt that cross-cultural orientation was insufficient, 6.7% felt the need for more Bible and theology, 6.2% for more training in Christian Education, 5.3% for more skill development courses (secretarial, mechanical, etc.), and 4.9% for more language training.<sup>129</sup> Unfortunately, Hill's questionnaire did not list specific competencies and ask whether respondents felt that training had been adequate or the extent of felt need for further training.

The concerns of mission leadership relative to missionary weaknesses *vis a vis* evangelism and church planting (including evangelistic, discipleship/nurturance, and church formation in culturally relevant patterns) speak to weaknesses in the pre-field training stage.<sup>130</sup> A survey made by Roger Greenwood of experienced missionaries from Africa,

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<sup>126</sup>Cureton, *ibid.*, pp. 200-201.

<sup>127</sup>Wycliffe has perhaps the most sophisticated selection and in-house training program of any mission, but this is because nearly every phase of their work from Bible translation to the flight and radio ministries of JAARS are very technical and therefore easily criterion-referenced.

<sup>128</sup>Monroe Brewer, "Continuing Education: The Life-Long Learning Link," Evangelical Missions Quarterly 24 (Oct. 1988): p. 278.

<sup>129</sup>Peter C. Hill, Final Report: Assessing the Needs of Missionaries, *op cit.*, p. 78.

<sup>130</sup>*cf.* Donald A. McGavran, Effective Evangelism: A Theological Mandate, (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1988), p. 3. Ralph Winter, "Penetrating the New Frontiers," in Unreached Peoples '79, C. Peter Wagner and Edward R. Dayton (eds.) (Elgin, Illinois: David C. Cook Publishing Co., 1979), pp. 43-44. Ron Fisher, "Why Don't We Have More



Asia, and Latin America on what they felt were necessary practical skills (which candidates need to begin developing before coming to the field) showed where they felt they had lacked practical training:<sup>131</sup>

1. How to make an assessment of the population of a city or town with a view to forming a missionary strategy
2. How to find and analyze the "people groups" in an area
3. How to strategize to reach urban hidden people
4. How to start out in a given location and with a given people, to identify, adapt, and appreciate a new culture ("how to become bonded")
5. How to approach and maintain language learning
6. How to make initial contacts with the people for evangelism
7. How to conduct a Bible study in a non-Christian home or other location
8. How to lead another person to Christ in a one-to-one situation within the cross-cultural context
9. How to organize and conduct a street meeting or other public witness on unfriendly "turf"
10. How to select, prepare, and use visual aids in evangelism, keeping cross-cultural communication concepts in view
11. How to find, prepare, and choose follow-up materials appropriate to the culture
12. How to organize follow-up programs for new converts
13. How to work in *team* relationships with missionaries, national pastors, and others
14. How to discover and make use of the resources available from government agencies, social services, parachurch organizations, and churches of other denominations
15. How to look for "redemptive analogies" in other cultures
16. How to develop one's own style of kingdom living in the city in such a way that verbal communication, practical love, personal and family needs, and identification with the target people are all given proper attention
17. How to develop new and creative forms of Gospel proclamation
18. How to plant and develop a church
19. How to develop and maintain a Biblical, holistic ministry
20. How to help one's children handle bi-culturalism
21. How to analyze and resolve cross-cultural conflicts, particularly conflicts between the mission and national church
22. How to raise and maintain financial support
23. How to administer emergency first aid; emergency child delivery; the selection and use of basic medicines
24. How to hire and supervise domestic help cross-culturally
25. How to maintain devotional life, spiritual nourishment, and avoid "burnout" under field pressures and cross-cultural conditions
26. How to shop in a barter economy, purchase local foods, and adjust the family budget to the local economy
27. How to select schools for the children, monitor their progress, and prepare them for re-entry to education in the home country
28. How to understand and respond to political and economic realities in the host country
29. How to assess one's own gifts and abilities and develop personal strategies for evangelism based on that assessment
30. How to understand the religions of the country and the answers which those religions attempt to give to mankind's needs and questions
31. How to present the Christian message in terms of the needs and questions of the people

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Church-Planting Missionaries?," Evangelical Missions Quarterly 14 (1978): 205-211. Jim Taylor, "Where are the Evangelists? Mission Agencies Want To Know," The Gospel Message 3 (1989): 3.

<sup>131</sup>Roger Greenway "Practical Skills Needed by Christian Missionaries", (listing made available at the IFMA-EFMA Personnel Committee Workshop, December 1982, Farmington, Michigan).



32. For single men and women, how to avoid giving false impressions and breaking local behavioural codes in relations with the opposite sex
33. How to train and develop others toward Christian maturity and leadership.

The problem is, while many of the issues listed above are included in courses taught at Bible Colleges and Seminaries, as field-skills most of them cannot be effectively learned in the classroom. The Peace Corps discovered this transference problem in their early years of training (delivered at selected universities). Harrison and Hopkins wrote in 1967,

The inapplicability of traditional university-based training has been a chronic complaint in organizations which must prepare large numbers of persons for service overseas. In the Peace Corps, for example, which in almost seven years now has trained more persons for overseas work than any other civilian government agency, *complaints about the irrelevance of traditional classroom training* have been growing steadily since the first volunteers entered training.

The complaints are not directed toward the content or the traditional academic disciplines that bear on overseas work. The content can be relevant to performance in an alien culture; moreover the acknowledged experts in the subject matter fields appropriate to overseas work are found in universities and colleges for the most part. The dissatisfaction is with the ways in which such subject matter is taught.

When returned Peace Corps Volunteers talk about their training, they do not complain about incompetent professors; *they complain about the sense in which their experience in training*, however interesting or well presented they may have been, *simply did not prepare them for the total life they had to lead overseas.*<sup>132</sup>

Peter Savage wrote, "The classic curriculum found in most seminaries and Bible Colleges has followed the patterns that have existed for the last two hundred years, where emphasis has been placed on the digestion of packets of knowledge rather than on bringing each student to spiritual maturity and effective ministry."<sup>133</sup> Mary Boppell Johnston echoed this concern when she noted, "There is evidence that of the approximately 1.5 million Americans who work abroad, an astounding number lack the essentials for overseas success."<sup>134</sup> This does not mean they are uneducated; it means they are inadequately trained in skills development specific to cross-cultural work.

## Purpose of the Study

### Primary Purpose

In the light of the concerns raised above, the purpose of this study is to do an exploratory and comparative investigation of the relationship between the pre-field and in-service educational preparation offered by missions to their personnel and the self- and

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<sup>132</sup>Roger Harrison and Richard L. Hopkins, "The Design of Cross-cultural Training: An Alternative to the University Model," Journal of Applied Behavioral Science 3 (1967): 431-432.

<sup>133</sup>Peter Savage, "Four Crises in Third World Theological Education," Evangelical Missions Quarterly 9 (1972): 30-31.

<sup>134</sup>Mary Boppell Johnston, "Training Needs of Americans Working Overseas," unpublished, mimeographed document, 1973, p. 1.



national/colleague-perceived effectiveness of their missionaries in the multi-varied skills needed for intercultural adaptation, acculturation, and ministry. This means that the areas of cross-cultural adaptation, acculturation, and general ministry skills of missionaries must be explored, with empirical rigour based on a sufficiently broad sample of missions and missionaries. Acculturation "process in time" will be explored (including culture learning, language-learning levels, and socialization depth) as will cross-cultural ministry skills (personal growth, ministry growth, spiritual dynamics, contextualization of ministry, difficulties faced, and assessments of ministry effectiveness by fellow missionaries and by nationals).

Effort will be made to identify predictors (general and educational background, personal characteristics, spiritual dynamics, growth in ministry dynamics, and language proficiency) to ministry criteria, that is, specific competencies that missionaries need for effective ministry. Furthermore, "most competent" and "least competent" missionaries will be identified on some of these criteria, and profiles of these two groups will be developed.

### **Secondary Purpose**

The secondary purpose of the study is to explore definitions and current concepts of adjustment, acculturation, and cross-cultural ministry competence. Each of these concepts is of importance for trainers, mission administrators, and, of course, missionaries themselves. The exploration of these definitions and concepts will be undertaken in chapter two.

### **Questions and Hypotheses**

There are a number of questions which the study attempts to answer.

1. What is the relationship between ministry effectiveness and the extent to which missionaries become acculturated?
2. What is the correlation between acculturation, language learning, and socialization?
3. What is the relationship between ministry effectiveness and the extent to which ministry knowledge and activities are contextualized?
4. What is the relationship between prior education/training and ministry effectiveness?
5. How do "traits" compare to prior education and training in their affect on ministry competence?
6. Is there a correlation between self-rated spiritual dynamics, personal and ministry growth, and ministry effectiveness?
7. What predictors identify those who will be most effective in long-term ministry-skills?

A number of theoretical hypotheses have been formulated which are anticipated as answers to the questions posed above.

Hypothesis 1: There is a significant positive relationship between ministry effectiveness and the extent to which ministry knowledge and skills are contextualized.



Sub-hypothesis 1: Missionaries that demonstrate higher levels of "spiritual dynamic" in their ministries are more effective at contextualizing their ministries and are consequently more competent.

Sub-hypothesis 2: Missionaries that have high levels of satisfaction and anticipation in their ministries are more effective at contextualizing their ministries and are consequently more competent.

Sub-hypothesis 3: Missionaries that have high levels of language proficiency are more effective at contextualizing their ministries and are consequently more competent.

Hypothesis 2: Contextualization is affected by the extent to which the missionary identifies with the culture and the people (acculturation).

Sub-hypothesis 1: Missionaries that are students of the culture and of the national church are the most effective at contextualizing their ministries.

Sub-hypothesis 2: Missionaries that are actively involved socially with the people are better acculturated.

Sub-hypothesis 3: Missionaries that are actively involved socially with the people are better able to contextualize their work.

Hypothesis 3: Cross-cultural interaction skills are influenced and developed by prior upbringing, education, and cross-cultural training.

Hypothesis 4: Cross-cultural interaction skills are influenced by personality characteristics.

Hypothesis 5: Cross-cultural ministry is sufficiently complex that predictors will also be diverse and complex. There will be no simple package of predictors that personnel directors can use.

### **Overview of Procedures and Descriptions of Instruments**

The author reviewed the literature on competence, specifically the areas related to social skills, social adjustment, social competence, communication competence, conversational competence, interpersonal competence, interactional competence, relational competence, interpersonal communication competence, cross-cultural interactional competence, and cross-cultural ministry competence. Furthermore, review was made of literature pertinent to cross-cultural preparation (mission, volunteer organizations, business, and military) with special reference to methods used for previous research.

Questionnaires were prepared, jury tested, and sent to Personnel Directors/ Candidate Secretaries of IFMA/EFMA missions to determine general selection and education/training policies and procedures. Questionnaires were also prepared, jury tested, and sent to the same missions' pre-field and on-field trainers to understand their training philosophies, program designs, content, training methodologies, and evaluative approaches. Finally, questionnaires were prepared, jury tested, and sent to leading evangelical Seminaries and Bible Colleges across North America to evaluate contemporary formal missionary education. These questionnaires were used for general comparative reference only and *their data is not included in this document*.



The core of the study sampled 120 missionaries from six mission societies in Brazil with very different pre-field and on-field training approaches: New Tribes Mission, Southern Baptists, UFM International, Christian Missions to Many Lands (CMML), Association of Baptists for World Evangelism (ABWE), and the Christian and Missionary Alliance (C&MA). Field instruments were applied to missionaries who were in their 1st, 2nd, 3rd, 4th, and 5th terms<sup>135</sup> for study of "process-in-time" of the acculturative and contextualization process. With one mission, for comparative purposes, selection of samples was based on a two-group approach: a random sampling from a half-population of leader-chosen "effective" missionaries and random sampling of missionaries not in that population.<sup>136</sup> CMML offers no pre-field or on-field training and therefore functions as a control group in terms of the effects of training. Corroboration of the data gathered on the 120 missionaries was through data gathered from missionary colleagues and from national colleagues. This data is important for cross-check on the missionaries' self-evaluations.

The *total study* included 6 different questionnaires. Those to the missions and schools were mailed with follow-up mailings to those who had not responded by a set date. Questionnaires to missionaries in Brazil were hand-delivered by the author<sup>137</sup> who could then explain their purpose, give instructions, and answer questions. Each missionary gave a questionnaire to a colleague and one to a Brazilian national who was a co-worker. The questionnaire filled out by missionaries was 42 pages long and composed of 10 different instruments.<sup>138</sup> The total number of instruments used in this study was sixteen, including questionnaires to 110 Personnel Directors or Candidate Secretaries from IFMA and EFMA missions, 48 pre-field trainers from the same group of missions, 54 Bible Colleges and Seminaries in Canada and the United States, 120 field missionaries from 6 missions in Brazil, 103 missionary colleagues,<sup>139</sup> and 97 national co-workers.<sup>140</sup>

### Delimitations of the Study

This study is generally population- and situation-specific. While field-study missions were chosen specifically because of differences in prior educational expectations and pre-

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<sup>135</sup>The length of a term is generally 4 or 5 years.

<sup>136</sup>Because of 1) the very small size of some of the missions and 2) the administrative structure of some of the groups this author was only able to do this with two of the missions.

<sup>137</sup>Most of the questionnaires for New Tribes missionaries were sent in envelopes by aircraft because of the extreme isolation in the jungle and the logistical difficulties of going to hand deliver. Some of the Baptist groups and a few missionaries with CMML could not meet with this author so special instructional tapes were prepared to send with the questionnaires and stamped return envelopes.

<sup>138</sup>See Appendix 1 for the main questionnaire. Appendices 2 and 3 include missionary colleague and national questionnaires.

<sup>139</sup>Of questionnaires received back from missionary colleagues, only 91 were usable.

<sup>140</sup>Because of the size of the study and the length of the present document, data from the questionnaire to the IFMA/EFMA Personnel Directors, IFMA/EFMA pre-field trainers, and Bible Colleges and Seminaries in the United States and Canada was not included in this document.



field/on-field training (including IFMA, EFMA, FOM, and independent groups), all would be considered evangelical Protestant in theology and all would have been raised with a generally similar North American worldview. All (except for three-quarters of the New Tribes missionaries) lived and ministered in urban situations. Field study questionnaires were all done in Brazil with Brazilian culture in view (in spite of the involvement of New Tribes in tribal areas and languages). This is important to point out because all cultures do not present the same adjustment and acculturation problems. Jones and Popper, for example, found a positive correlation between the exposure of a culture to the outside world and the performance, satisfaction, language proficiency, and attrition rates of Peace Corps volunteers in that culture.<sup>141</sup> Thomson and English, in their findings that differences in adjustment according to cultural setting correlated with completion of service, discovered that Latin America had one of the highest rates of attrition.<sup>142</sup> Tucker and Schiller's findings on variations in adjustment problems for Navy personnel according to regional differences was similar.<sup>143</sup> Therefore, this studies' findings may or may not be transferable to other non-Latin regions of the world, nor are non-North Americans likely to adjust and acculturate the same way that North Americans do. Ideally, a study of this nature should also be done on missionaries in and from other regions of the world for comparative purposes.

No missionaries were included in the study who had been on the field for less than a year. This was because this study is less geared to the "adjustment" stage and is more concerned with acculturation, contextualization, and socialization factors. However, missionaries were asked to assess the intensity of problems in their first year along with the second/third years and current situation (from four to over twenty-five years), allowing for analysis of development from adjustment and adaptation to acculturation.

Questionnaires to missions were sent to the Interdenominational Foreign Missions Association (IFMA) and the Evangelical Foreign Missions Association (EFMA). These two groups alone have over 19,400 overseas personnel or nearly one half of all evangelical Protestant foreign missionaries from North America. The Southern Baptists and New Tribes Mission (not members of IFMA or EFMA) have over 2,000 overseas personnel each. For consistency, questionnaires to leading Bible Colleges and Seminaries were only to those which are evangelical Protestant in theology.

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<sup>141</sup>R. Jones and R. Popper, "Characteristics of Peace Corps Host Countries and the Behavior of Volunteers," Journal of Cross-Cultural Psychology 3 (September 1972): 233-245.

<sup>142</sup>Captane P. Thomson and Joseph T. English, "Premature Return of Peace Corps Volunteers," Public Health Reports 79 (1964): 1065 - 1073

<sup>143</sup>Michael F. Tucker and J. E. Schiller, "Overview Summary for an Assessment of the Screening Problem for Overseas Assignment," (Denver, Colorado: Center for Research and Education, 1975).



Finally, this study is not designed to critique educational background, pre-field and on-field training programs, or the effectiveness of missionaries, though observations on these will certainly be made. Rather, it is intended to discover measurements of effectiveness as determined by missionaries, colleagues, and national co-workers and to correlate variables that are consistent with those deemed competent in cross-cultural ministry in contrast to those that are not. Educational and training components as well as factors which make for competency and which can be isolated for inclusion in training will be looked for. Finally, a profile of the competent cross-cultural missionary will be developed from research findings.

### **Definitions of Terms**

A number of authors have wrestled with the problem of defining cross-cultural adjustment and effectiveness, noting that much research and writing has been attempted without first clearly defining the criteria which measure overseas performance and from which come the complex components that make for intercultural competence.<sup>144</sup> Because the constructs related to adjustment, adaptation, acculturation, and competence are so complex they have been left entirely to chapter two. However, other terms which are frequently used in this study will be defined here.

**Contextualization** refers to “the attempt to communicate the message of the person, works, Word, and will of God in a way that is faithful to God’s revelation, especially as it is put forth in the teachings of Holy Scripture, and that is meaningful to respondents in their respective cultural and existential contexts. Contextualization is both verbal and nonverbal and has to do with theologizing,<sup>145</sup> Bible translation, interpretation, and application,<sup>146</sup> incarnational lifestyle, evangelism, Christian instruction, church planting and growth, church organization, worship style--indeed with all of those activities involved in carrying out the great commission.”<sup>147</sup>

The idea of contextualization is predicated on four presuppositions: 1) since the Gospel is divine revelation (not human speculation) it must be distinguished from human culture (a difficult task for anyone whether in one’s own or another culture) and “since it

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<sup>144</sup>See Philip G. Benson, "Measuring Cross-cultural Adjustment: The Problem of Criteria," International Journal of Intercultural Relations 2 (1978): 21 - 37 and Michael Brein and Kenneth H. David, "Intercultural Communication and the Adjustment of the Sojourner," Psychological Bulletin 76 (1971): 215 - 230.

<sup>145</sup>For further discussion on the role of contextualization in theologizing see Bruce C. E. Fleming, Contextualization of Theology, (Pasadena, California: William Carey Library, 1980).

<sup>146</sup>This study is more concerned with the macro-levels of contextualized work and ministry than with the critical micro-levels of biblical-meaning, such as contextualization of theology, translation, music, etc.

<sup>147</sup>David J. Hesselgrave and Edward Rommen, Contextualization: Meanings, Methods, and Models, (Grand Rapids, Michigan: Baker Book House, 1989), p. 200.



belongs to no one culture, it can be adequately expresses in all of them,”<sup>148</sup> 2) though distinct from human culture, the Gospel can be and must be expressed in cultural forms-- languages, symbols, and forms, 3) because of human sin and resultant evil structures and practices the Gospel calls on all cultures to change<sup>149</sup> and 4) believers in any culture are able to apply the Gospel and biblical norms within their own culture, both because they are members of that culture and because they are “believer-priests” able to interpret and apply the Word of God under the guidance of the Holy Spirit.

The Gospel, then, must be “contextualized,” that is, permitted to be expressed and applied within the forms of each individual culture without being weighted by the “cultural baggage” which the missionary may advertently or inadvertently bring with him/her. This is done through “critical contextualization” which neither rejects nor accepts old beliefs or customs (or the new) without examination as to the meaning and places they have within a cultural setting in the light of biblical norms. Hiebert suggests this is done through four steps: 1) individuals and the church must recognize the need to deal biblically with all areas of life; 2) church leaders must lead individuals and congregations in *uncritically* gathering and analyzing traditional customs associated with the question at hand (ie. births, marriages, funeral rites, etc.); 3) church leaders then lead individuals or congregations in Bible studies related to the question at hand; 4) individuals and congregations then evaluate their own past customs or the application of Christian practice in the light of their understanding of biblical truth and their own culture. They then decide what should be done. Thus, the church as a “discerning community” under the guidance of the Holy Spirit and the Word of God contextualizes the gospel to its own culture.<sup>150</sup>

**Culture**<sup>151</sup> is the sum total of ways of living, the more or less integrated systems of ideas, feelings, and values and their associated patterns of behaviour and products shared by a group of people who organize and regulate what they think, feel, and do.”<sup>152</sup> “Culture,

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<sup>148</sup>Paul G. Hiebert, Anthropological Insights for Missionaries idem., p. 53

<sup>149</sup>The Bible affirms that there are God-given standards of righteousness by which all humans and cultures will be judged. See for example Mt. chapters 5-7 for standards of living; Mt. 13:24-43, 47-51; 25:31-46; Jn. 5:22,23,27; Acts 17:30-31; Rom. 1:18-32; 2:1-27.

<sup>150</sup>Hiebert, *ibid.*, pp. 53-56, 185-192.

<sup>151</sup>Kroeber and Kluckhohn’s survey of the literature came up with 164 different definitions of culture demonstrating a wide variety of perceptions of culture. They made this comment, “We do not propose to add a one hundred and sixty-fifth formal definition. ...Without pretending to “define,” however, we think it proper to say at the end of this summary discussion of definitions that we believe each of our principal groups of definitions points to something legitimate and important. In other words, we think culture is a product; is historical; includes ideas, patterns, and values; is selective; is learned; is based upon symbols; and is an abstraction from behaviour and the products of behaviour.” A. L. Kroeber and Clyde Kluckhohn, Culture: A Critical Review of Concepts and Definitions (New York: Random House, A Vintage Book, 1952), p. 307-308.

<sup>152</sup>Paul G. Hiebert, Anthropological Insights for Missionaries idem, p. 30.



and the people who are part of it, interact; so that culture is not static. Culture is the response of a group of human beings to the valid and particular needs of its members. It, therefore, has an inherent logic and essential balance between positive and negative dimensions.”<sup>153</sup> Culture is essentially a code, that is “a set of rules or body of knowledge whereby culturally appropriate behaviour is generated. ...Like grammar, culture links behaviour and meaning.”<sup>154</sup>

**Culture Shock** is “a stress reaction where salient physiological and physical rewards are generally uncertain, difficult to control or predict. Thus a sojourner remains anxious, confused, and sometimes apathetic or angry until he or she has had time to develop a new set of behavioural assumptions that help him or her to understand and predict the social behaviour of the local natives.”<sup>155</sup>

**Communication** is “the transmission of messages from a sender to a receiver in any one of a variety of codes--language,<sup>156</sup> gestures, signs, written symbols, etc.--to which the sender and receiver attach meaning.”<sup>157</sup> Birdwhistell notes that, whereas culture focuses attention on structure, communication focuses attention on process.<sup>158</sup> This process includes verbal (written as well as oral), non-verbal (such as gestures and gaze), and situational (such as utilization of space and environs) codes. **Intercultural communication:** Gudykunst points out that defining intercultural communication is as problematic as defining communication in general, quoting Saral, “the newness of the field has attracted scholars from varying disciplines, who, while enriching and broadening the area, have also rendered the field so diverse and discursive that it defies definition.”<sup>159</sup> Generally we can say that it “refers to the communication process (in its

<sup>153</sup>David S. Hoopes and Margaret D. Pusch, "Definition of Terms," in Multicultural Education, Margaret Pusch (ed.) (Chicago, Ill.: Intercultural Network, Inc., 1981) p. 3.

<sup>154</sup>Jack Bilmes and Stephen T. Boggs, "Language and Communication: The Foundations of Culture," in Perspectives on Cross-Cultural Psychology, Anthony J. Marsella, Roland G. Tharp and Thomas J. Ceborowski (ed.) (New York: Academic Press, 1979) pp. 55-56.

<sup>155</sup>D. Weissman and Adrian Furnham, "The Expectations and Experiences of a Sojourning Temporary Resident Abroad: A Preliminary Study," Human Relations 40 (1987): p. 314.

<sup>156</sup>Language is “the systematic, structured verbal and...written code used for communication among a group of people. Language and culture are determining factors in the way people think, the way they communicate, and the way they behave.” Hoopes and Pusch, *idem*, p. 3. According to Hymes, language is both *referential* and *stylistic*, that is, it has both the function of transferring grammatical meaning (reference) and social (contextual or stylistic) meaning. These are inter-related in the sense that a speaker may use language grammatically and syntactically correctly but without regard to context and therefore incompetently. See D. Hymes, Foundations in Sociolinguistics: An Ethnographic Approach (Philadelphia, PA: University of Pennsylvania Press, 1974), p. 93.

<sup>157</sup>Hoopes and Pusch, *idem*., p. 4.

<sup>158</sup>Bilmes and Boggs, *idem*., p. 66.

<sup>159</sup>William B. Gudykunst, "Toward a Theoretical Framework for the Study of Intercultural Communication," Conference: Speech Communication Association Convention, (Washington, D.C.: 1977), p. 1. Citation from T. Saral, "Intercultural Communication: An Overview." In B. Rubin (ed.), Communication Yearbook, Vol. 1. (New Brunswick, NJ: Transaction, Inc., 1977), p. 389.



fullest sense) between people of different cultural backgrounds. It may take place between individuals or between social, political, or economic entities in different cultures, such as government agencies, businesses, educational institutions, or the media. This includes non-verbal as well as verbal communication and the use of differing codes, linguistic or non-linguistic.”<sup>160</sup> Because culture has a profound impact on the nature of communication, how people communicate with each other interculturally will differ widely. The differences include such aspects as: communication styles, non-verbal communication codes, symbolic importance of language usage, value and behavioural systems underlying communication, use of media, worldview and thinking processes, and processes of perception.<sup>161</sup>

**Education** is the systematic and entire course of scholastic instruction given to prepare for one’s life-work and is therefore generally associated with formal schooling. More broadly it is the development of intellectual and emotional skills which enable people to cope with human existence and undertake specific professions. **Formal** education also known as “schooling” is the formal structure<sup>162</sup> designed for most effective transfer of the knowledge and intellectual skills deemed to be essential by society for life and work.<sup>163</sup> **Informal** education is “the lifelong process by which every person acquires and accumulates knowledge skills, attitudes, and insights *from daily experiences and exposures to the environment*. ...generally, informal education is unorganized and often unsystematic; yet it accounts for the great bulk of any person's lifetime learning-- including that of even a highly "schooled" person.”<sup>164</sup> **Non-formal** education is a planned instructional design which uses both overt and covert procedures in a *more flexible environment* to teach toward a goal determined by a regulated policy.<sup>165</sup>

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<sup>160</sup>Hoopes and Pusch, *idem.*, p. 6.

<sup>161</sup>See David J. Hesselgrave, Communicating Christ Cross-culturally, (Grand Rapids, Mich.: Zondervan Publishing House, 1978).

<sup>162</sup>LaBelle defined it as “the *institutionalized*, chronologically-graded, and hierarchically structured educational system, spanning lower primary school and the upper reaches of the university.” Thomas J. LaBelle, “Formal, Nonformal, and Informal Education: A Wholistic Perspective on Lifelong Learning,” International Review of Education 28 (1982): p. 161.

<sup>163</sup>Ted Ward, et al., “Effective Learning: Lessons to be Learned from Schooling,” in Effective Learning In Non-formal Education Ted Ward and Jr. William A. Herzog (ed.) (East Lansing, Michigan: Program of Studies in Non-Formal Education, Michigan State University, 1974).

<sup>164</sup>Arthur W. Coombs. “Perceiving, Behaving, Becoming: A New Focus for Education.” Cited by Albert R. Wight and Mary Anne Hammons, Guidelines for Peace-Corps Cross-Cultural Training, Part I: Philosophy and Methodology. (Estes Park, Colorado: Center for Research and Education, March 1970).

<sup>165</sup>Ted Ward and John M. Dettoni, “Increasing Learning Effectiveness through Evaluation,” in Effective Learning in Non-formal Education Ted Ward and Jr. William A. Herzog (ed.) (East Lansing, Michigan: Program of Studies in Non-formal Education, Michigan State University, 1974), p. 18.



**Experiential education** refers to the “process of learning through concrete, personal, active, and subjective experiences, included within the total educational plan. The learner is an active participant, internalizing his experiences as insights and reactions are reflected upon. In most cases, the learning takes place with a facilitator and other members of a group who enable reflection. Where experiential education takes place within a formal context its format includes semi-structured, open-ended, and open-minded exercises which are intended to 1) parallel real-life situations, 2) involve all participants, 3) require active participation, 4) provide instant feedback, 5) be flexible to fit learning needs and maturity levels. Experiential learning differs from other instructional approaches in that 1) it generally begins from the affective level rather than the cognitive, and 2) its purpose is to help individuals *learn how to learn* the skills, values, attitudes, and habits, how to orient self to new contexts, and how to do problem solving. When tied to intercultural communication, its objectives include, 1) helping the learner increase his or her understanding of cultures, 2) develop skills for effective cross-cultural interaction, and 3) to promote intercultural communication between persons of different cultures.”<sup>166</sup>

**Cross-cultural orientation** has to do with acquainting others with an existing situation or environment,<sup>167</sup> generally emphasizing survival information and “do’s and don’ts” for culture entry. It is a minimum of information usually given to prospective sojourners.

**Cross-cultural training**, on the other hand, moves beyond this to the “how’s” of culture entry, answering such questions as: How can the individual increase his/her effectiveness in the intercultural environment? How can the sojourner cope adequately with adjustment in the new culture? How can learning be maximized in the new environment?<sup>168</sup>

Training usually has behavioural skills development in view. Robert Kohls identifies the following characteristics which distinguish training from classroom education:

1. Awareness of different approaches which are most appropriate for teaching content, which are best for transferring skills, and which can best effect attitudinal changes.
2. Special attention to the ways in which adults learn.
3. Strong preference for the experiential approach
4. The development of a large number of learned-methodologies, activities, techniques, structured experiences, and instrumented exercises.
5. Emphasis on learning how to learn, which is considered far more valuable than learning a specific body of knowledge.

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<sup>166</sup>Nobleza C. Asuncion-Lande, "Perspectives on Experiential Learning in Inter-cultural Communication," Conference: Annual International Meeting of the Communication Association of the Pacific, (Tokyo, Japan: June 10-11, 1978), pp. 1-8. ERIC Document ED 163 528.

<sup>167</sup>Donald Batchelder, "Training U. S. Students Going Abroad," in Overview of Intercultural Education, Training, and Research: Vol. 2. Training and Education, David Hoopes, Paul Pedersen and George Renwick (eds.) (Washington, D.C.: Society of Intercultural Education, Training, and Research (SIETAR), 1978) p. 4.

<sup>168</sup>Janet Marie Bennett, "Modes of Cross-Cultural Training: Conceptualizing Cross-Cultural Training as Education," International Journal of Intercultural Relations 10 (1986): p. 118.



6. The systems approach applied to the development of the training program.
7. Tailoring to meet the specific needs of individual trainees.
8. Special attention paid to the sequence and mix of training activities.
9. Emphasis given to the “processing” of experiential learning activities.
10. The trainee as the central figure in the training program.<sup>169</sup>

**Culture learning** may be defined as “‘process learning’ which includes: the acquisition of new knowledge; becoming familiar with the importance of perceptions and their cultural origins; learning new ways of processing information; adopting new values, attitudes and way of behaviour; coming to process the feelings and emotions of those who have been raised within that culture. Culture learning, then, leads to what can be referred to as cognitive, affective, and behavioural ‘shifts’ or ‘transformations.’ Culture learning can be dramatic and traumatic since it involves significant new extensions in ways of thinking, valuing, and behaving and the related confrontations with existing views of oneself and the world.”<sup>170</sup>

**Missionary internship** is (ideally) a structured, hands-on, in-service training program focussed primarily upon the experiential aspect of missionary training conducted in a supervised (reflective and supportive) setting for prospective missionaries who already have academic and spiritual preparation for the task. It provides modelling, motivation, and transfer of skills from an experienced missionary to the candidate, allowing for assessment of the candidate’s strengths, weaknesses, and gifts, and providing for his/her learning growth through ministry experiences. It’s intent is to increase the intern’s adaptability, ministry skills, gifts, and capacity for coping successfully with the stresses of interpersonal living and work within a cross-cultural setting.

A **missionary** is one who, knowing he or she has a call or mandate from God to serve in a different culture, does so through involvement in evangelism, teaching, medical work or some other avenue of service. Regardless of the type of work, an individual is a missionary only as the focus of that work is fulfilment of the will of God through the planting and/or development of the Church and the extension of the Kingdom of God.<sup>171</sup>

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<sup>169</sup>Robert Kohls, “Issues in Cross-Cultural Training,” in Ethical Perspectives and Critical Issues in Intercultural Communication, N. Asuncion-Lande (ed.) (Falls Church, VA: SCA, 1980), pp. 86-87.

<sup>170</sup>Josef A. Mestenhauser and R. Michael Paige, “Cross-Cultural Training for Development: Concepts, Issues and Ideas,” (Minneapolis, MN: University of Minnesota, 1983), p. 2.

<sup>171</sup>This definition is based on biblical rather than historical perspectives of what a missionary is. See Mt. 10:1-11:1 and Lk. 10:1-20 as fore-runners; “Great Commissions”: Mt 28:18-20; Mk.16:15,16; Lk. 24:45-49; Jn. 20:21; Acts. 1:8; “Specific Commissions”: Acts 8:26-40; Acts 13:1-4; recognition of the charge: Acts 4:24-31; Acts 8:4. On the basis of this definition there are, no doubt, individuals around the world who call themselves missionaries but are not, whether or not they belong to a mission organization.



A **sojourner** is “one who makes a stay as a temporary resident (as of a traveller or missionary) in a foreign country.”<sup>172</sup> The term *national* will be used for one who is native to his own country and culture.

**Evangelical** is a term applied to Protestant Christians who hold a theological perspective which emphasizes the doctrine of salvation by faith in the atoning death of Jesus Christ through personal conversion (thereby denying the saving efficacy of either good works or the sacraments), the authority of Scripture, and the importance of preaching the Scripture as contrasted with ritual.<sup>173</sup>

**Mission Agency** is an organization which works in association with churches to select, evaluate, orient and send missionaries, and to handle their home and field administration.

**Missiology** is “the academic discipline or science which researches, records, and applies data relating to the biblical origin, history (including the use of documentary materials), anthropological principles and techniques, and theological base of Christian mission. The theory, methodology, and data banks are particularly directed towards: 1) the processes by which the Christian message is communicated, 2) the encounters brought about by its proclamation to non-Christians, 3) the planting of the Church and organization of congregations, the incorporation of converts into those structures and fellowship, internally to maturity, externally in outreach as the Body of Christ in local situations and beyond, in a variety of culture patterns.”<sup>174</sup> As a discipline, “missiology is linked to evangelism and branches of theology including biblical studies, hermeneutics, systematic theology, ethics, and church history. Missiology also integrates non-theological disciplines such as cultural anthropology, cross-cultural psychology, intercultural communication, economics of developing nations, and political science.”<sup>175</sup>

**Social Support** is practical help, psychological encouragement or “verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one’s life experience.”<sup>176</sup>

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<sup>172</sup>“Sojourner,” Webster’s Third New International Dictionary, 1981, p. 2166.

<sup>173</sup>Combined from the definitions in “Evangelical” Webster’s New Collegiate Dictionary, 1981, p. 392 and “Evangelical” Shorter Oxford English Dictionary, revised 1964, p. 641.

<sup>174</sup>Alvin Marvin, The Means of World Evangelism: Missiological Education, (South Pasadena, CA.: William Carey Library, 1974), p. 27.

<sup>175</sup>Timothy Gene McKee, “A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala, Volume 1” (D. Ed., Pepperdine University, 1981), p. 5.

<sup>176</sup>T. L. Albrecht and Mara B. Adelman, “Communicating Social Support: A Theoretical Perspective,” in Communicating Social Support, T. L. Albrecht, Mara B. Adelman and Associates (ed.) (Newbury Park, CA: Sage, 1987) p. 19.



### **Summary of Remaining Chapters**

Chapter Two will review the literature on competence specifically relevant to cross-cultural ministry. Definitions and theoretical conceptualizations of cultural adjustment, adaptation, and acculturation will be explored, followed by an extensive discussion on the development of the concept of competence. Issues related to the assessment of competence, such as the “trait” (that is, the role of the personality or disposition in competence) vs “state” (the impact of situational realities on competence) debate, skills for interacting and learning from one’s context, cognitive social learning functions (social symbolic ideation, perception, categorization, attribution, and self-monitoring) and cognitive complexity concepts are considered. Finally, models of cross-cultural competence are presented and discussed.

Chapter Three will review a selected number of empirical studies undertaken since 1973 which focused on the development of predictors and criteria for intercultural living and work. These include the methodologies and results of Jessie Harris’ study with 53 Peace Corps Volunteers in the island kingdom of Tonga in 1973, the 1974 Kennedy and Dreger study on missionaries, Michael Tucker’s CRE study on Peace Corps Volunteers in Brazil in 1973, the BIAI, NOAS, CCII, and NOAI studies on United States Naval personnel between 1974 and 1976, Ruben’s Behavioural Assessment Scale tested in 1976 and 1977, Hawes “Selection Weekend” review in 1977, the 1979 CIDA study, Hopkin’s YFU 1982 study, McKee’s study on missionaries in 1981, and Janet Metzger’s 1984 study of training effects on missionaries.

Chapter Four explains the methods and processes used in the research design for the present study. Sample size and characteristics (educational background, pre-field training experiences, and current ministries), the development and content of the instruments, and the data collection procedures are all carefully explained.

Chapter Five, which is the longest chapter, develops the data analysis of dependent, independent, and moderator variables. Discussion of the statistical procedures used (item statistics, factor analysis, step-wise regression analysis, discriminant analysis, and extreme - end profile analysis) accompany the results.

Chapter Six discusses the hypotheses and questions as they relate to data results. A profile of the competent missionary is presented based on exploration of the data in the light of earlier discussions on missionary competence as these relate to education, training, and the selection of missionaries. Suggestions will also be made for further research based on the findings and limitations of this present study.



## CHAPTER TWO

### REVIEW OF THE LITERATURE ON COMPETENCE RELEVANT TO CROSS-CULTURAL MINISTRY

#### Introduction

While there are extensive theoretical and empirical literatures on both culture and competence, there is little overlapping of the two. Psychological research has tended to focus on incompetent or maladjusted people, while anthropological research has looked more at the ideal person within cultural norms.<sup>1</sup> Consequently, apart from a growing literature on “cross-cultural adaptation,” “cross-cultural effectiveness,” and “psychological acculturation,” there has been little empirical research on how culture situationally and essentially affects competence.<sup>2</sup>

Competence itself is a wide-ranging concept, encompassing the disciplines of psychiatry, clinical psychology, communication, social psychology, developmental psychology, and linguistics.<sup>3</sup> Neologisms include: competence, social skills, social adjustment, social competence, psychosocial competence, heterosocial competence, communication competence, rhetorical competence, grammatical competence, conversational competence, referential competence, interpersonal competence, interactional competence, relational competence, interpersonal communication competence, and environmental competence.<sup>4</sup>

The result has been a vast literature fragmented into various conceptual and theoretical approaches. The intent of this chapter is to identify those theories and models that have particular significance for intercultural communication, cross-cultural interpersonal relationships, and intercultural work and ministry skills as they relate to missionaries at the microlevels of ministry. The **microlevels** of ministry include those elements of everyday life

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<sup>1</sup>Norman Dinges and Lorraine Duffy, "Culture and Competence," in Perspectives on Cross-Cultural Psychology, Anthony J. Marsella, Roland G. Tharp, and Thomas Ciborowski (eds.) (New York: Academic Press, 1979), p. 209.

<sup>2</sup>Norman Dinges, "Intercultural Competence," in Handbook of Intercultural Training, Vol. 1 - Issues in Theory and Design, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, (New York: Pergamon Press, Inc., 1983), p. 196.

<sup>3</sup>Brian H. Spitzberg and William R. Cupach, Handbook of Interpersonal Competence Research, (New York: Springer-Verlag, 1989), p. 1-2.

<sup>4</sup>Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, (Beverly Hills, CA: Sage Publications, 1984), p. 33.



where interpersonal, social, and communication interactions take place. While research on ministry competence at the **macrolevels** of ministry is critically important, that is, strategy planning and ministry skills in such activities as pioneer church-planting, nation-wide evangelistic endeavours, training of national church leadership, or large scale community development,<sup>5</sup> these are beyond the scope of this present study.

The questions that this chapter intends to deal with include:

- 1) What is competence? How has it been theoretically and empirically defined?
- 2) What are the characteristics, traits, abilities, overt behaviours, and cognitive processes which demonstrate competence?
- 3) What are the implications of cultural contexts on behavioural expressions of competence?

### **Definitions of Adjustment, Adaptation, and Acculturation**

While the terms “adjustment” and “adaptation” are often used interchangeably as if to mean the same thing, clear distinction between the constructs is made in the literature.

#### **Adjustment**

Church’s comprehensive review of adjustment found that most researchers operationalized adjustment on the plus side in terms of variables such as academic/professional performance and satisfaction, problems and satisfactions with personal and social elements of the sojourn, degrees of interaction with nationals, and outcomes such as positive attitudes toward the host country, a broader international perspective, and personal as well as professional growth.<sup>6</sup> On the negative side, operationalization of the construct was made in terms of culture stress, culture shock, culture fatigue, role shock, and problems faced by foreign students and sojourner groups.

Brein and David identified adjustment with the ability to achieve effective interpersonal relations with the host culture through understanding the people in that culture, which is enabled through the capacity to communicate with them on both verbal and non-verbal levels of behaviour.<sup>7</sup> David as well states that “social adjustment refers to whether the sojourner learns the expected verbal and nonverbal behaviours of the host culture.”<sup>8</sup> Kealey, uses the same term, “social adjustment” to refer to “success at adapting to the new culture by

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<sup>5</sup>For example, Edward R. Dayton and David A. Fraser, Planning Strategies for World Evangelization, (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1980), suggest this type of macroplanning.

<sup>6</sup>Austin T. Church, "Sojourner Adjustment," Psychological Bulletin 91 (1982): 541.

<sup>7</sup>Michael Brein and Kenneth H. David, "Intercultural Communication and the Adjustment of the Sojourner," Psychological Bulletin 76 (1971): 216.

<sup>8</sup>Kenneth H. David, "Intercultural Adjustment and Application of Reinforcement Theory to Problems of 'Culture Shock'," Trends 4 (1972): 9.



achieving some degree of participation in the local culture, e.g. learning the language, making friends with nationals, enjoying their customs, etc.”<sup>9</sup> These authors come close to equating adjustment with initial acculturation. They also centralize the importance of communication.

Adler’s discussion of culture shock in adaptation concludes that successful adjustment results in *psychological* development wherein “feelings, and the ways in which the world is experienced, are reflected in the abilities to communicate, to enter interpersonal relationships, to perceive and deal with differences, and to behave in new situations for which there is no personal precedent.”<sup>10</sup> Ruben and Kealey identify *psychological adjustment* as “the general psychological well-being, self-satisfaction, contentment, comfort-with, and accommodation-to a new environment after the initial perturbations which characterize culture shock have passed.”<sup>11</sup>

In much the same vein but out of a more complex theoretical framework stemming from the Theory of Work Adjustment by Dawis, Lofquist and Weiss<sup>12</sup>, Cheung and Culha define adjustment as an on-going and dynamic process wherein the individual maintains “correspondence” with the cross-cultural environment.<sup>13</sup> Correspondence is the interplay of individual and environment fulfilling the other’s requirements, resulting in **satisfaction** (that is, the environment fulfilling the requirements of the individual) and **satisfactoriness** (the individual fulfilling the requirements of the environment). The authors identify four components of these individual needs and their corresponding environmental reinforcers: a personal-achievement component, a social-emotional component, a physical-material component, and a Weltanschauungen (world view) component. As the individual’s needs in these areas correspond to the environment’s reinforcer patterns (as expectations), so satisfaction occurs. Furthermore, as an individual’s abilities (academic knowledge, occupational skills, social and communicative skills, survival capabilities and copabilities,

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<sup>9</sup>Daniel Kealey, "Adaptation to a New Environment," (Ottawa, Canada: Canadian International Development Agency, n.d.), p. 1

<sup>10</sup>Peter S. Adler, "The Transitional Experience: An Alternative View of Culture Shock.," Journal of Humanistic Psychology 15 (1975): 20.

<sup>11</sup>Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-Cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 21. In the same way, Taft defines adjustment as “the feeling of being in harmony with one’s environment; this is a function of the degree to which the environment fulfills a person’s needs and goals and it is reflected directly in feelings of satisfaction with various areas of life.” Ronald Taft, "The Psychological Adaptation of Soviet Immigrants in Australia," in Cross-cultural Adaptation. Current Approaches Young Yun Kim and William B. Gudykunst (ed.) International and Intercultural Communication Annual, Vol. 11 (Beverly Hills, CA: Sage Publications, 1987), p. 154.

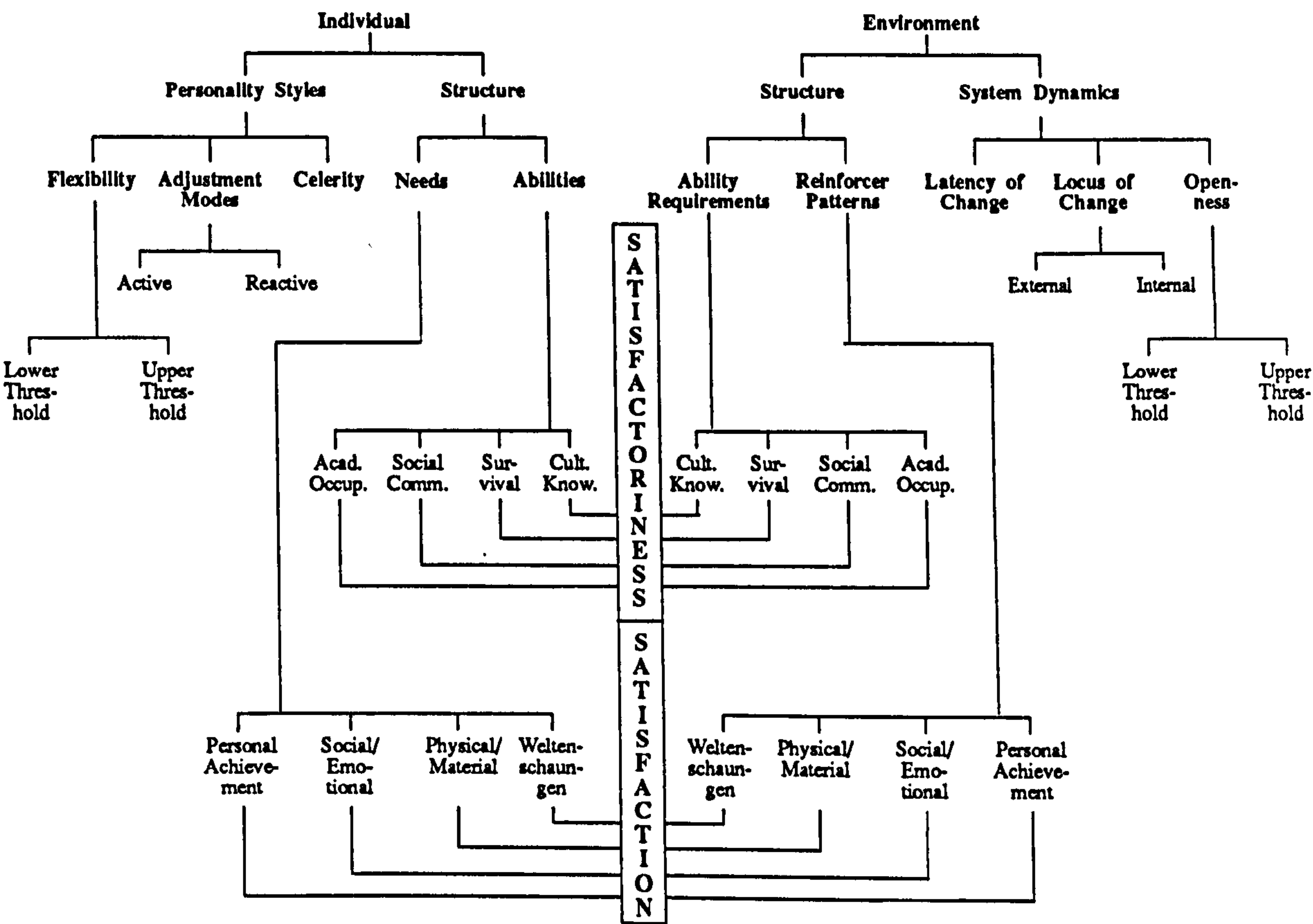
<sup>12</sup>R. V. Dawis, L. H. Lofquist, and D. J. Weiss. A Theory of Work Adjustment (Minneapolis, MN: University of Minnesota, Minnesota Studies in Vocational Rehabilitation, 1968).

<sup>13</sup>Fanny M. Cheung and Meral U. Culha, "A Correspondence Model of Cross-Cultural Adjustment," (Unpublished mimeographed manuscript from Hoopes Collection, now part of the Bennett Collection, Portland, Oregon, n.d.), pp. 1-30.



and cultural knowledge) correlate with the environment's demands in these areas, there will be satisfactoriness of adjustment.

Figure 1: Components of the Correspondence Theory of Cross-Cultural Adjustment<sup>14</sup>



Adjustment is predicated further on the structure of an individual's personality (its needs and response potentials or flexibility) and the structure of the environment (that is, the rigidity or openness of its demands<sup>15</sup> on the sojourner). Flexibility is defined by the authors as "the personality style of the individual in accepting the discrepancies between his/her needs and the environment's reinforcer patterns and in continuing behavioural changes to adjust to such discrepancies."<sup>16</sup> Adjustment modes are either active (the individual acting on his environment to change it) or reactive (the individual responding to discordance by changing his/her own behavioural responses, attitudes, values, etc.). Celerity has to do with

<sup>14</sup>Ibid., p. 3.

<sup>15</sup>Cross-cultural environments differ in their tolerance of deviance from their demands and requirements, both in standards of 'adjustment,' and in acceptance and tolerance toward 'maladjustment.' Loci of change differ as well, some cultures more apt to initiate change action at the individual (seeing the source of discordance as the function of the individual) and others more apt to modify their own systems to meet the needs of the individual (recognizing the source of discordance within their own structures).

<sup>16</sup>Ibid., p. 12.



the reaction time that an individual takes to respond to discordance with the environment.

While there is nothing new about the person-environment interaction concept, when applied to cross-cultural training this perspective allows for a more objective measurement of adjustment than do most definitions of adjustment. Grove and Torbiörn also developed a complex conceptualization, identifying characteristics of the socially adept person on two planes: cognitive clarity and applicable behaviour. The interculturally adjusted individual is one whose behaviour is not only socially acceptable but also interpersonally effective and recognized to be so by his or her associates. Furthermore, the adjusted individual "feels confident that his understanding of the way the world works is accurate, complete, clearly perceived, and positively useful in guiding his behaviour. He recognizes (perhaps implicitly) that his habitual pattern of activity is consistent with his mental model of the functioning of society."<sup>17</sup> This latter point is especially crucial for enabling congruence of understanding, behaviour, and the realities of the cultural milieu.

Hannigan's definition is a good composite summary of all the above:

Adjustment can be conceptualized as a psychosocial concept which has to do with the process of achieving harmony between the individual and the environment. Usually this harmony is achieved through changes in the individual's knowledge, attitudes, and emotions about his or her environment. This culminates with satisfaction, feeling more at home in one's environment, improved performance, and increased interaction with host country persons.<sup>18</sup>

### **Adaptation**

Adaptation is usually identified with managing the stress of culture entry which often results in "shock" to the system.<sup>19</sup> Identifying adaptability with "copability,"

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<sup>17</sup>Cornelius Lee Grove and Ingemar Torbiörn, "A New Conceptualization of Intercultural Adjustment and the Goals of Training," International Journal of Intercultural Relations 9 (1985): 206.

<sup>18</sup>Terence P. Hannigan, "Traits, Attitudes, and Skills that are Related to Intercultural Effectiveness and Their Implications for Cross-Cultural Training: A Review of the Literature," International Journal of Intercultural Relations 14 (1990): 91.

<sup>19</sup>For discussions on the construct, "culture shock" see Peter S. Adler, "The Transitional Experience: An Alternative View of Culture Shock," Journal of Humanistic Psychology 15 (1975): 13-23. Barbara Gallatin Anderson, "Adaptive Aspects of Culture Shock," American Anthropologist 73 (1971): 1121-1125. Mary L. Baumgardner, "Transforming Culture Shock" (M.A. creative project in lieu of thesis., University of Northern Colorado, 1976), p. 1-77. Josiah Bwatwa, et al., A Study of the Adjustment of Missions and Service Personnel Returning from Overseas Assignments (Goshen, Indiana: Goshen College, 1972), pp. 1-53. Austin T. Church, "Sojourner Adjustment," Psychological Bulletin 91 (1982): 540-572. Douglas A. Cort and Michael King, "Some Correlates of Culture Shock Among American Tourists in Africa," International Journal of Intercultural Relations 3 (1979): 211 - 225. Kenneth H. David, "Culture Shock and the Development of Self-Awareness," Journal of Contemporary Psychotherapy 4 (1971): 44-48. Juris G. Draguns, "On Culture Shock, Biculturalism, and Cultural Complexity," manuscript, Pennsylvania State University, n.d.), pp. 1-11. Adrian Furnham, "The Adjustment of Sojourners," in Cross-cultural Adaptation, Current Approaches, Young Yun Kim and William B. Gudykunst (ed.) International and Intercultural Communication Annual, (Beverly Hills, CA: Sage Publications, 1987), pp. 42-61. Philip R. Harris and Dorothy L.



Motamedi defines adaptability as the ability to sense and understand internal and external environments and to take action to achieve a fit between the two. This requires the ability to interact with the environment in such a way as to ensure survival. He identifies four responses that can be made in a given circumstance to achieve adaptation: 1) conform to the change requirement and undertake necessary changes (termed “conforming”), 2) make determined effort to influence the source, speed (change), and/or direction (favourability) of changes (“controlling”), 3) resist changes as much as possible (“resisting”), and 4) reject change implementations (“opposing”).<sup>20</sup>

Motamedi defines copability as the *internal ability* to maintain identity and overcome the problem of change.<sup>21</sup> While adaptability consciously attempts to relate the individual to the external environment, copability refers to the efforts to maintain the integrity of the internal system and deal with changes to his/her self-concept, cognitive processes, emotions,

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Harris, "Preventing Culture Shock," The Bridge (1976): 16, 37-40. Susan A. Locke and Fred M. Feinsod, "Psychological Preparation for Young Adults Traveling Abroad," Adolescence 17 (1982): 815-819. Barbara Marriott, "Managing Culture Shock," LadyCom: The Military Lifestyle Magazine 15 (1983): 80,81,86. K. Oberg, "Cultural Shock: Adjustment to new cultural environments," Cultural Anthropology 7 (1960): 177-182. James P. Spradley and Mark Phillips, "Culture and Stress: A Quantitative Analysis," American Anthropologist 74 (1972): 518-529. Ronald Taft, "Coping with Unfamiliar Cultures," in Studies in Cross-cultural Psychology, Neil Warren (ed.) (London, England: Academic Press, 1977) pp. 121-153. R.S. Zaharna, "Self-Shock: The Double-Binding Challenge of Identity," International Journal of Intercultural Relations 13 (1989): 501-525.

<sup>20</sup>Kurt Kourosh Motamedi, "Adaptibility and Copability: A Study of Social Systems, Their Environment, and Survival," Group and Organization Studies 2 (1977): 483.

<sup>21</sup>Motamedi compares adaptibility and copability in the following ways: From Motamedi, "Adaptibility and Copability: A Study of Social Systems, Their Environment, and Survival," p. 485.

<b>Adaptibility</b>	<b>Copability</b>
Leads to a greater relevancy and better match with external environment.	Leads to a stronger identity and better integration with the internal environment.
Involves boundary expansion and contraction.	Involves boundary conservation.
Directed to achieve deliberate, conscious goals and objectives.	Directed to achieve conscious and unconscious needs.
Determined by external environment and others.	Determined by internal environment and self.
Involves trans-boundary changes (import and export change).	Involves intra-system changes.
Search is outward and extrospective.	Search is inward and introspective.
Time thrust (temporal orientation) is from future to now.	Time thrust is from the now to the future.
Temporal emphasis is on the "future."	Temporal emphasis is on the "present."
Spatial emphasis is about "there."	Spatial emphasis is about "here."
Consciousness function is dominated by sensory feeling and empirical thinking.	Consciousness function is dominated by intuitive feeling and intuitive speculative thinking.
Thrust is toward change of the external environment or change of the internal environment to fit the external conditions.	Thrust is toward maintenance, integration, and retention of the internal parts as a whole.



and other dissonance. Copability also has four responsive tactics: 1) identifying, confronting, and alleviating internal change (referred to as “resolution”), 2) identifying the problem and taking action to stop the development of the problem and alleviate pain (referred to as “arresting”), 3) delaying action or failing to deal with the problem (“stalling”), and 4) refusing to acknowledge that a problem exists, which in major problems could have serious long-term effects (“repressing”).<sup>22</sup>

Corresponding with Motamedi’s responsive tactics, Berry, Kim, and Boski identify three strategies of adaptation.<sup>23</sup> In the first, *adjustment*, behavioural change is in the direction of reducing tension by bringing behaviour into line with environmental press. In the second strategy, *reaction*, changes are in retaliation against the environmental press, while in the third, *withdrawal*, response to environmental press is removal, in effect, alienation.<sup>24</sup> In intercultural adaptation, for example, learning to eat Ethiopian *wat* with one’s fingers using *injera* is considered **static** both in behavioural adaptability and in copability. It does not put much of a strain on the individual. However, bargaining in a marketplace when one has never done so is **dynamic** both in adaptation and in copability, while the internal ethical tension raised in a cultural interaction where bribes are expected causes adaptability and copability to be even more dynamic.

Nash and Schaw’s study of the adaptation of Japanese in Cuba validates the perspective of the interplay between adaptability and copability, while identifying various adaptive responses. The “traditional man” retains his home cultural perspectives, attributions, and values. There is little emotive identification with the host culture. The “autonomous man” has a secure identity based on traditional values and maintains a differentiated and flexible emotional repertoire. His involvement with the host culture does not violate his personal identity. The “transitional man” is emotionally more acculturated, identifying with and expressing emotions and affiliative needs like the host culture. The “transitional man” is more adapted than the “autonomous man” who is more adapted than the “traditional man.” Of the process the authors note, “The crucial factor would appear to be a psychological one:

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<sup>22</sup>Ibid., p. 484.

<sup>23</sup>John W. Berry, Uichol Kim and Pawel Boski, “Psychological Acculturation of Immigrants,” in Cross-cultural Adaptation, Current Approaches, Young Yun Kim and William B. Gudykunst (ed.) International and Intercultural Communication Annual, Vol. 11, (Beverly Hills, CA: Sage Publications, 1987), p. 63.

<sup>24</sup>See discussion by Michael McGuire and Steven McDermott, “Communication in Assimilation, Deviance, and Alienation States,” in Cross-cultural Adaptation, Current Approaches, Young Yun Kim and William B. Gudykunst (ed.) International and Intercultural Communication Annual, Vol. 11, (Beverly Hills, CA: Sage Publications, 1987), pp. 90-105.



the maintenance of personal identity, i.e., a sense of continuity or sameness, in a strange environment.”<sup>25</sup>

Sternin states that true adaptation does not occur until there is no longer significant cultural *contrast, ambiguity* of social situations has passed, and much that was *unexpected* in the culture has become commonplace.<sup>26</sup> To arrive at this state, Grove and Torbiörn refer to the need for gradual adaptation wherein cognitive understanding grows while emotions are kept in abeyance. “Gradual adaptation enables the newcomer to maintain his sense of personal identity while judiciously adjusting certain of his assumptions, values, attitudes, opinions, ideas, styles of reasoning, and patterns of behaviour to bring them more nearly into line with those prevailing in the new environment.”<sup>27</sup>

Hannigan writes, “Adaptation encompasses cognitive, attitudinal, behavioural, and psychological changes in an individual who lives in a new or foreign culture. These changes result in the individual’s movement from discomfort to feeling at home in the new environment.”<sup>28</sup> It is evident from this and the definitions noted above that adaptation is a subset of acculturation, comprising the beginning stages of the acculturative process. Barry, Kim, and Boski identify adaptation as both a *process* (in which changes occur in a system so that all parts of the system function together better than before) with various strategies of adaptation and as an *outcome* (in which the parts function better, having become adapted) with varieties of adaptation.<sup>29</sup> These levels of adaptation may include 1) assimilation, 2) integration, 3) rejection (self-imposed withdrawal from the larger or host society) or 4) deculturation (extensive alienation, loss of identity, and marginality).<sup>30</sup>

Of the levels of adaptation, **assimilation** results in significant loss or rejection of cultural identity in spite of the positive relationship to the dominant society. This is equivalent to “going native.”<sup>31</sup> **Integration** (a type of bi-culturalism) enables one to retain

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<sup>25</sup>Dennison Nash and Louis C. Schaw, "Personality and Adaptation in an Overseas Enclave," Human Organization 21 (1963): 252-263, quote from p. 252.

<sup>26</sup>Martin I. Sternin, "Toward the Specification of a General Adaptation Process in Americans Overseas.," n.d.), p. 18.

<sup>27</sup>Grove and Torbiörn, "A New Conceptualization of Intercultural Adjustment and the Goals of Training," p. 216.

<sup>28</sup>Hannigan, *idem*, p. 92.

<sup>29</sup>John W. Berry, Uichol Kim and Pawel Boski, "Psychological Acculturation of Immigrants," *idem*, p. 63.

<sup>30</sup>John W. Berry, "Acculturation as Varieties of Adaptation," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, (Boulder, CO: Westview Press, 1980), p. 15.

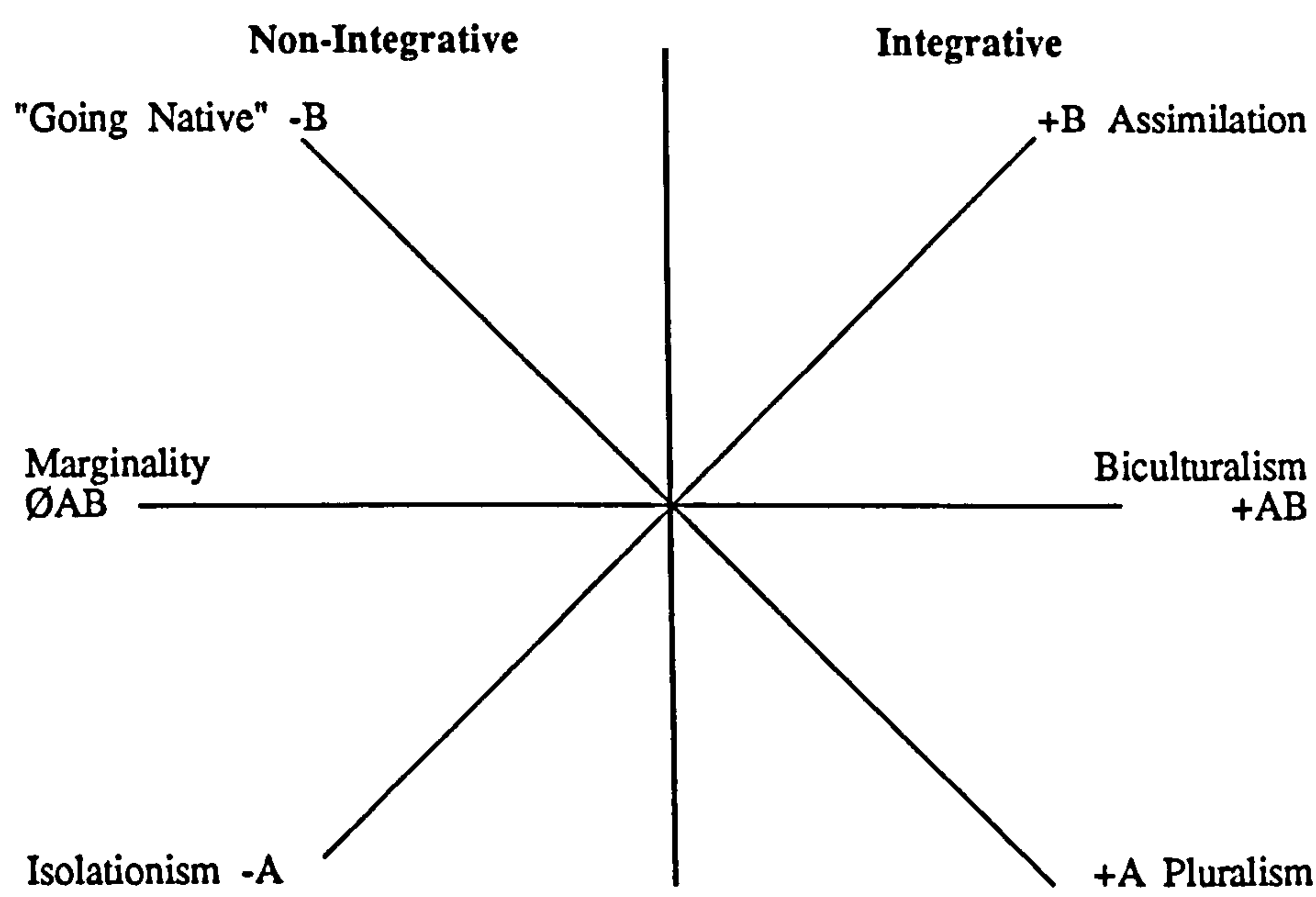
<sup>31</sup>“Acculturation should be distinguished from assimilation. Assimilation refers to the complete loss of original ethnic identity in an individual or group of individuals leading to absorption into the dominant society. While assimilation is often one of the results of acculturation, the two phenomena are not the same.” S. Alexander Weinstock, Acculturation and Occupation, (The Hague, Netherlands: Martinus Nijhoff, 1969), p. 4.



cultural identity as well as maintain a positive relationship with the host culture. **Rejection** enables an individual to retain cultural identity but at the cost of antagonism with the larger society. **Deculturation** results in a loss of cultural identity and alienation from the larger society. Groups such as the Huron Indians in the eastern United States experienced deculturation or the total collapse of their culture in a short time.

McKee’s adaptive model depicts these alternatives.<sup>32</sup>

Figure 2: Six Adaptive Patterns



Legend:  
A = Home Culture  
B = Host Culture  
+ = Integrative: accepting and supporting both cultures  
- = Non-integrative: accepting and supporting neither culture or only one

There are six adaptive patterns in two categories: non-integrative (-) and integrative (+). In the diagrammed model “B” is host to “A.” In the **non-integrative category**, individual or culture “A” is unwilling or unable to accept the validity of the difference<sup>33</sup> between both cultures. The *isolationists* (-A) interact as far as is needed with culture “B” but maintain negative stereotypic views and attitudes or are disparaging and/or patronizing

<sup>32</sup>The model was developed by the Missionary Training Research Center, Pasadena, CA, no longer in existence. Timothy Gene McKee, "A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala" (D.Ed. dissertation, Pepperdine University, 1981), pp. 18-28.

<sup>33</sup>For discussion of the importance of understanding and accepting the differences between cultures see Milton J. Bennett, "Towards Ethnorelativism: A Developmental Model of Intercultural Sensitivity," in Cross-cultural Orientation, Michael Paige (ed.) (New York: University Press of America, 1986), pp. 30-31.



toward "B." Perceptions and stereotypes tend to be influenced and reinforced by the group (culture or enclave). Such cultural "ghettos" exist as a common phenomenon.<sup>34</sup> In most cases, they act as stabilizing agents for new sojourners in the midst of the stressful anomie caused by the new culture. However, the attitudes and judgements of co-nationals often have a hindering influence on the ability of sojourners to adapt and acculturate.<sup>35</sup>

Moderately isolated individuals demonstrate "neglectful communication" patterns, resulting from the inability to learn or understand the norms, values, or beliefs of the culture, which in turn leads to reduced capacity to interact successfully with nationals. Neglectful communication includes 1) relative lack of communication, 2) low levels of intimacy, 3) low levels of information seeking, 4) nonreciprocity or negative feedback, 5) low levels of affiliative expressiveness, and 6) inconsistent messages (ignoring communication from another, contradictions between verbal and nonverbal communication, and differing interpretations of communication events).<sup>36</sup> Sometimes culture shock can result in excessive isolation or "alienation," expressed by refusal to interact with the host culture, withdrawal into native culture, inattention to host culture media, refusal to use host culture's language, or hostility to host culture.<sup>37</sup> At this level expatriates will usually return to their home cultures or hide away in their cultural enclaves.

The *marginalists* (*OAB*) exist on the periphery of both cultures, living a life of "in-betweenness,"<sup>38</sup> while those who "go native (*-B*)" identify so completely with the host culture that they deride, denigrate, and often deny their own culture. While initially "going native"

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<sup>34</sup>A fair amount of literature has developed around the phenomena of expatriate ghettos. See John Useem and Ruth Hill Useem, "The Interfaces of a Bi-national Third Culture: A Study of the American Community in India," Journal of Social Issues 23 (1967): 130-143. Louise H. Kidder, "The Inadvertent Creation of Neocolonial Culture: A Study of Western Sojourners in India.," International Journal of Intercultural Relations 1 (1977): 48-60. Harley M. Upchurch, "Toward the Study of Communities of Americans Overseas," (Alexandria, VA: Human Resources Research Organization (HumRRO), 1970), pp. 1-19. Erik Cohen, "Expatriate Communities," Current Sociology 24 (1977): 1-133.

<sup>35</sup>Thomas and Elizabeth Brewster emphasize the need for bonding with the host culture, especially during the critical early months, by refusing to be whisked away into the expatriate context thus ending up both relatively isolated from the nationals and having the mindset influenced by expatriate views and assumptions. E. Thomas Brewster and Elizabeth S. Brewster, Bonding and the Missionary Task, (Pasadena, CA: Lingua House, 1980, 4th printing 1984), pp. 1-26.

<sup>36</sup>Michael McGuire and Steven McDermott, "Communication in Assimilation, Deviance, and Alienation States," p. 97,98.

<sup>37</sup>Ibid, p. 102.

<sup>38</sup>Note the "double-swing" or 5th stage of adaptation identified by Muneo Jay Oshikawa, "Cross-Cultural Adaptation and Perceptual Development," in Cross-cultural Adaptation, Current Approaches, Young Yun Kim and William B. Gudykunst (ed.) International and Intercultural Communication Annual, 11 (Beverly Hills, CA: Sage Publications, 1987), pp. 142-143. See also Muneo Jay Oshikawa, The Double-Swing Model of Eastern-Western Intercultural Communication, (unpublished manuscript available from East-West Communication Institute, Honolulu, Hawaii, 1980), pp. 1-18.



appears to be assimilation, it is a reverse type of ethnocentrism.<sup>39</sup> Those who are marginalists can experience anomie and may move toward isolation or they may be constructive, utilizing their own culture for internal stability, while moving toward a bi-cultural integration. Those who adapt in an **integrative pattern (+)** are willing to accept the validity, meaning structures, and influence of both cultures. These move toward assimilation, acculturation, or bi-culturalism/multiculturalism.<sup>40</sup>

**Acculturation**

A classic definition of acculturation is that of Redfield, Linton, and Herskovitz: “acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups.”<sup>41</sup>

In 1954 the Social Science Research Council (SSRC) Summer Seminar defined acculturation as:

<sup>39</sup>Bennett calls this “reversal” since it is merely a reversing of ethnocentrism, applying it to a different culture. Milton J. Bennett, “Towards Ethnorelativism: A Developmental Model of Intercultural Sensitivity,” p. 41.

<sup>40</sup>Following are tabulated similarities and differences in adaptive patterns: (McKee, idem., p. 21)

Culture of Acquired Traits	Adaptive Pattern: Integrative Mode	Directional Change	Value Change	Internal Thought Process Change	Accepting Group	Reference Group
B	+ (assimilation) ----- - ("going native")	uni-directional	X	X	B, (A) ----- B	B
AB	+ (bicultural) ----- - (marginality)	bi-directional ----- - Ø	A, B ----- breaks	A, B ( ) ----- breaks	A, B ----- ØAB	A, B ----- Ø
A	+ (pluralism) ----- - (isolationism)	Ø	( )	( )	A, B ----- A	A

Legend: A = Home Culture      + = Integrative      X = Required      Ø = Null  
B = Host Culture      - = Non-integrative      ( ) = Optional

<sup>41</sup>Robert Redfield, Ralph Linton and Melville J. Herskovitz, "Memorandum for the Study of Acculturation," *American Anthropologist* 38 (1936): 149. Linton, [Linton, 1940 #1117] using almost the same words, described acculturation as “those phenomena which result when groups of individuals having different cultures come into continuous first hand contact, with subsequent changes in the original culture patterns of either or both groups.” Ralph Linton, "The Distinctive Aspects of Acculturation," in *Acculturation in Seven American Indian Tribes*, (New York: Appleton-Century, 1940) p. 501.



culture change that is initiated by the conjunction of two or more autonomous cultural systems. Acculturative change may be the consequence of direct cultural transmission; it may be derived from noncultural causes, such as ecological or demographic modifications induced by an impinging culture; it may be delayed, as with internal adjustments following upon the acceptance of alien traits or patterns; or it may be a reactive adaptation of traditional modes of life. Its dynamic can be seen as the selective adaptation of value systems, the processes of integration and differentiation, the generation of developmental sequences, and the operation of role determinants and personality factors.<sup>42</sup>

In these definitions and in many of the earlier studies on acculturation,<sup>43</sup> the focus of acculturation was on the cultural group with only passing reference, if any, to individual acculturation.<sup>44</sup> However, Broom and Kituse, Dohrenwend and Smith, as well as Teske and Nelson acknowledged that acculturation could occur at the individual level though always in correlation with the movement towards acculturation of the group.<sup>45</sup> With the burgeoning growth of world-wide intercultural travel and residence, contemporary researchers have begun to focus even more on the individual, utilizing a new term, **psychological acculturation**, and generally defining it as "the process by which individuals change their psychological characteristics, change the surrounding context, or change the amount of contact in order to achieve a better fit (outcome) with other features of the system in which they carry out their life."<sup>46</sup> When career-minded sojourners (missionaries, businessmen, etc.) move cross-culturally they leave their own cultural group behind, unless there is immediate integration into a co-national expatriate "ghetto" upon arrival. For this reason, the concept of

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<sup>42</sup>Social Science Research Council Summer Seminar, "Acculturation: An Exploratory Formulation," American Anthropologist 56 (1954): 974.

<sup>43</sup>See for example Homer G. Barnett, et al., "Acculturation: An Exploratory Formulation," American Anthropologist 56 (1954): 973-1002. Melville J. Herskovits, Acculturation: The Study of Culture Contact, (Gloucester, Mass.: Peter Smith, 1958). A. Irving Hollowell, "Sociopsychological Aspects of Acculturation," in The Service of Man in the World Crisis, Ralph Linton (ed.) (New York: Columbia University Press, 1945), pp. 171-200.

<sup>44</sup>Padilla writes, "Despite the abundant literature that exists [on acculturation] there is still some question about the actual process of acculturation, what the proper unit of analysis (individual vs. group) should be, and whether an adequate model can be conceptualized to describe the rate and extent of acculturative change. Also missing from most studies of acculturation is an analysis of the impact of acculturation on the psychological functioning of the individual. There has been discussion of cultural marginality.... Rarely though is there mention of the psychological processes involved in the individual who is in a state of transition between two cultural orientations or in the individual who has completely acculturated. We know very little about how the individual adapts and/or copes with the pressures to acculturate." Amado M. Padilla, "The Role of Cultural Awareness and Ethnic Loyalty in Acculturation," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, (Boulder, CO: Westview Press, 1980), pp. 47.

<sup>45</sup>Leonard Broom and John I. Kitsuse, "The Validation of Acculturation: A Condition to Ethnic Assimilation," American Anthropologist 57 (1955): 44-48. Bruce P. Dohrenwend and Robert J. Smith, "Toward a Theory of Acculturation," Southwestern Journal of Anthropology 18 (1962): 30-39. Raymond H.C. Teske and Bardin H. Nelson, "Acculturation and Assimilation: A Clarification," American Ethnologist 1 (1974): 361-363.

<sup>46</sup>Berry, Kim and Boski, "Psychological Acculturation of Immigrants," p. 63.



psychological acculturation is important for defining and describing their individual acculturative processes.

Two other terms used often interchangeably with acculturation are “bi-culturalism” and “multiculturalism.” Seelye defines biculturalism as “the ability to perform those patterns of another culture which lead to effective functioning in the target culture, and to recognize their meaning when another person performs them.”<sup>47</sup> McKee clarifies this by stating that individuals are bicultural when they are equally at home in two cultures (in contrast to marginals who are at home in neither).<sup>48</sup> Taft refers to individuals who are multicultural as those who

are able to function in more than one culture with no more than minimal adaptation required from one to the other. ...Like the true bi-lingual, a true bi-cultural has the skills to perform competently the roles required by each cultural context and he is able to avoid gaffs that could result from inappropriate switching between cultures. One of the characteristics of a well developed and integrated skill is that it resists interference from associated but irrelevant experiences; consequently each set of cultural skills, because of the way in which the components are integrated, stands on its own with little deterioration resulting from the coexistence of the other.<sup>49</sup>

The concept of biculturalism as effective functioning in more than one culture is helpful as a standard within the more elusive concept of acculturation,<sup>50</sup> which is more a process than a state. Missionaries are called to an equivalent Biblical concept, **incarnational identification**, exemplified by Christ, “who, being in very nature God...made himself nothing, taking the very nature of a servant, being made in human likeness. And being found in appearance as a man, he humbled himself and became obedient to death—even death on a cross!” (Phil. 2:6-8, NIV). The incarnation resulted in total identification with man, including the cultural mesh of Palestine. As the “Son of Man,” He set aside the privileges of Deity and

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<sup>47</sup>H. Ned Seelye, “An Objective Measure of Biculturation: Americans in Guatemala, a Case Study,” The Modern Language Journal 53 (1969): 504.

<sup>48</sup>McKee, *idem*, p. 24.

<sup>49</sup>Ronald Taft, “Coping with Unfamiliar Cultures,” in Studies in Cross-cultural Psychology, Neil Warren (ed.) 1 (London, England: Academic Press, 1977), pp. 143.

<sup>50</sup>Olmeda identifies two major problems in the study of acculturation. The first is the relatively loose term, “culture,” represented by hundreds of definitions. Definitions of culture that meet operational and quantitative criteria acceptable to psychological enquiry are still in the early stages of development. The second problem is that acculturation has been approached from the disciplines of anthropology, sociology, psychology, and psychiatry, resulting in multiple applications of constructs, definitions, and methodologies peculiar to each of these disciplines. For example, psychologists “view acculturation in terms of intrapsychic mechanism, that is, in change in the perceptions, attitudes, and cognitions of the individual.” Anthropologists choose an interpsychic or interpersonal approach related to “socialization, social interaction, and social mobility.” Sociologists have focused on issues of race relations and minorities. This has resulted in a nonintegrated body of knowledge with considerable complexity. Esteban L. Olmedo, “Acculturation: A Psychometric Perspective,” American Psychologist 34 (1979): 1062-1063.



received the limitations of humanity.<sup>51</sup> Since total identification is impossible in this same sense,<sup>52</sup> especially in M<sub>2</sub> and M<sub>3</sub> type cultures<sup>53</sup> where one is patently not of the same ethnic stock, identification must be in creating, as Reyburn suggests, "a communication and a communion."<sup>54</sup>

The Willowbank Report of the Lausanne Committee for World Evangelism defined incarnational identification for the missionary with the following elements. As Christ "emptied himself" of the rights, privileges, and powers which He enjoyed as God's Son, so the missionary must be willing to renounce status, position, and privilege, expressing attitudes "not of domination but of service." As Christ lived His life in dependence on others (asking a Samaritan woman for water, living in other people's homes and depending on other people's money, being lent a boat, donkey, etc.), so the missionary must learn dependence on others. As Christ exposed Himself to temptation, sorrow, economic need, and pain, the missionary must be willing to be vulnerable to privations, needs, dangers, and possibly death. As Christ took on "flesh and blood" (Heb. 2:14-18) in His identification with man, befriending the poor and powerless, healing the sick, feeding the hungry, touching untouchables, and risking His reputation, so the missionary is called to identification in mastering the host culture's language, "learning to think as they think, feel as they feel, and do as they do." The subjective test of identification is two-fold: identifying how far the missionary feels s/he belongs to the people, and *more importantly*, how much the people feel the missionary belongs to them.<sup>55</sup>

Paul, a model intercultural missionary, was multicultural, utilizing both the superstructure of Roman roads, political structure, and language, and the unique contextual

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<sup>51</sup>For further discussion on this, see Sherwood G. Lingenfelter and Marvin K. Mayers, Ministering Cross-Culturally, (Grand Rapids, Mich.: Baker Book House, 1986), pp. 15-17.

<sup>52</sup>Jacob Loewen also writes of the limitations to complete incarnation when he speaks of financial, emotional, and social limitations, expectations of nationals, absences and furloughs, and standards of living that keep missionaries from experiencing true incarnational identification. Jacob A. Loewen, "Roles: Relating to an Alien Social Structure," Missiology, 4:2 (April 1976): 217-219. See also Harriet Hill, "Incarnational Ministry: A Critical Examination," Evangelical Missions Quarterly, 26:2 (April 1990): 196-201.

<sup>53</sup>For discussion of the terms M<sub>0</sub>, M<sub>1</sub>, M<sub>2</sub>, and M<sub>3</sub> (or E<sub>0</sub>, E<sub>1</sub>, E<sub>2</sub>, and E<sub>3</sub>) in terms of cultural distance see Ralph D. Winter, "The Task Remaining: All Humanity in Mission Perspective," in Perspectives on the World Christian Movement: A Reader, Ralph D. Winter and Stephen C. Hawthorne (ed.) (Pasadena, CA: William Carey Library, 1981) pp. 312-326.

<sup>54</sup>Reyburn's attempts to become as Quichua as a Quichua were constantly thwarted no matter how he dressed, acted, lived like them, because, as his Quichua friend confided in him one day, he had not been born of an Indian mother. William D. Reyburn, "Identification in the Missionary Task," in Perspectives on the World Christian Movement: A Reader, Ralph D. Winter and Stephen C. Hawthorne (ed.) (Pasadena, CA: William Carey Library, 1981) pp. 465-475.

<sup>55</sup>The Lausanne Committee for World Evangelism, "The Willowbank Report," in Perspectives on the World Christian Movement: A Reader, Ralph D. Winter and Steven C. Hawthorne (ed.) (Pasadena, CA: William Carey Library, 1981) pp. 520-522.



situations found in every town and city. His multicultural perspectives and ministry attitudes were clearly shown when he wrote of himself,

though I am free and belong to no man, I make myself a slave to everyone, to win as many as possible. To the Jews I became like a Jew, to win the Jews. To those under the law I became like one under the law (though I myself am not under the law), so as to win those under the law. To those not having the law I became like one not having the law (though I am not free from God's law but am under Christ's law), so as to win those not having the law. To the weak I became weak, to win the weak. I have become all things to all men so that by all possible means I might save some. (I Cor. 9:19-22, NIV)

Paul, a Jew, was "apostle to the Gentiles," born and raised in Tarsus, a crossroads of trade and commerce, an important port in the Roman commercial world, where he learned the skills of multiculturalism. The proof of his capacity was his incredible ability to relate to men and women, Jews, Greeks, Romans, and Barbarians alike,<sup>56</sup> and through that, by the power of the Holy Spirit, see thousands of churches established through Asia Minor and into Europe. Notice that in spite of his relating to "those under law" and "those without law," Paul always had a clear self-image, never losing sight of who he was or of his relationship to God. "Paul, a servant (δουλος--slave) of Jesus Christ, called to be an apostle, separated unto the gospel of God." (Rom. 1:1, KJV)

From their research, Szapocznik and Kurtines developed a unidimensional, psychosocial model of acculturation in which an individual's acculturation is a linear function of the amount of time that a person has been exposed to the host culture, the rate being determined by the age and sex of the person. Behavioural acculturation was found to be correlated to age, while value acculturation was not. Males acculturated more quickly in the behavioural dimension, while both males and females acculturated at the same pace in the value dimension.<sup>57</sup>

The same authors posited another multidimensional model of biculturalism, suggesting that acculturation takes place in terms of the total cultural context, proceeding unidimensionally if the culture is monocultural, and bi-culturally if there are multiple cultural groups<sup>58</sup> or where there is a strong primary cultural affinity. This acculturation takes place along two independent dimensions concurrently. One dimension is a linear process of

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<sup>56</sup>Note how he could discuss the Messiahship of Christ so persuasively in Synagogues (i.e. Acts 13:13-44; 14:1), argue with Epicureans, Stoics, and other Grecian philosophers (Acts 17:16-34), speak so compellingly with rulers (Acts 24:24-26), and minister effectively to islanders (Acts 28:1-10), all culturally very different.

<sup>57</sup>Jose Szapocznik and William Kurtines, "Acculturation, Biculturalism and Adjustment Among Cuban Americans," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, (Boulder, CO: Westview Press, 1980), pp. 141-143.

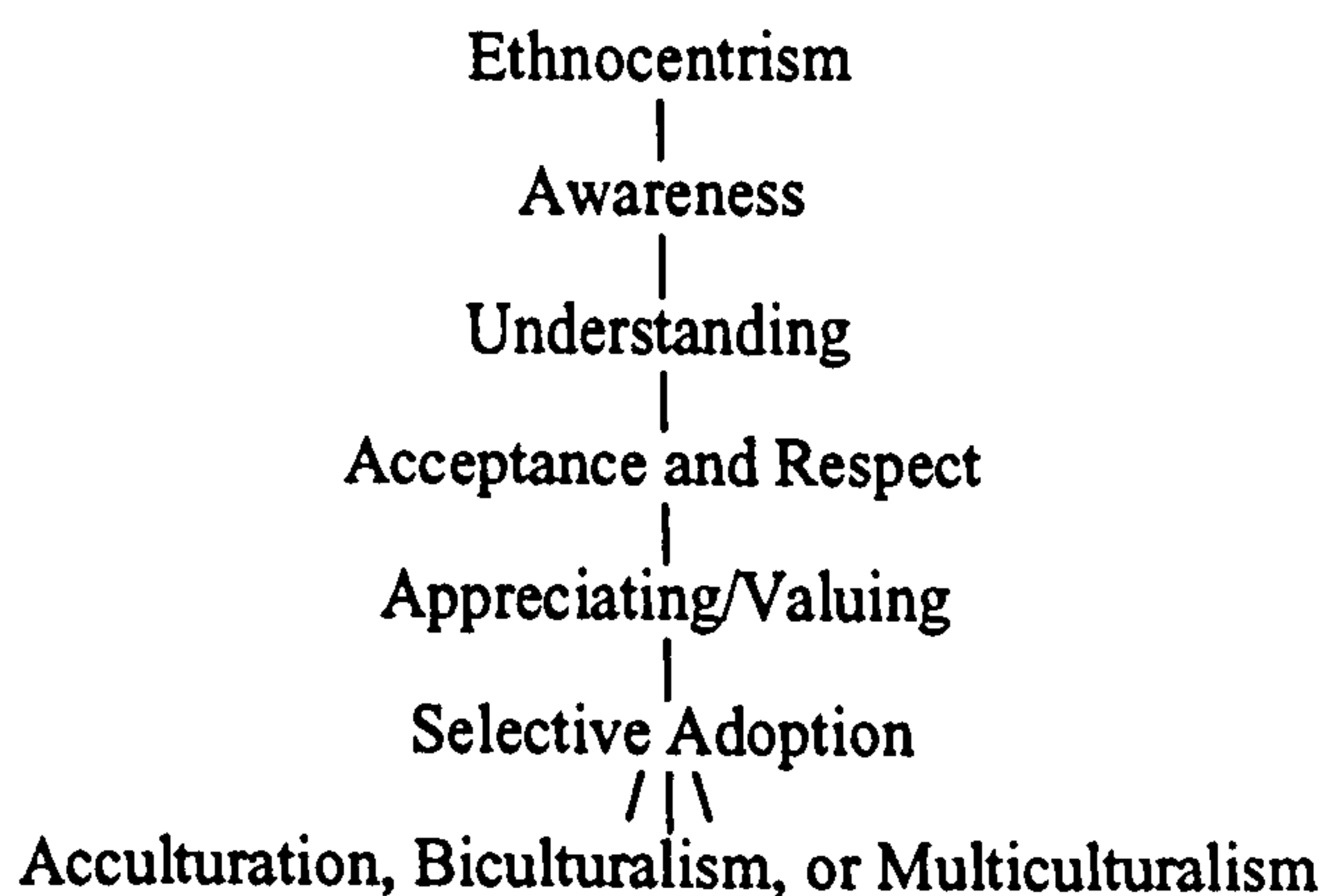
<sup>58</sup>*Ibid.*, p. 143-145.



accommodating to the host culture. The second dimension is a complex process wherein the individual retains and/or relinquishes aspects of personal primary culture.

In the same line, Dohrenwend and Smith postulated two concurrent dimensions of change in the acculturative process: 1) maintenance or loss of traditional culture and 2) acquisition of new cultural traits.<sup>59</sup> McFee also discovered biculturalism among the Blackfoot Indians, wherein new cultural traits were acquired to supplement native traits. He called these "150% persons" because they were 75% white and 75% Indian.<sup>60</sup>

Hoopes suggested a phenomenological model describing a processual sequence toward acculturation, which he termed "intercultural learning." These steps flow on a continuum from ethnocentrism, to an awareness of the existence and differentness of other cultures, to cognitive understanding of their differentness and cultural complexity, to acceptance and respect of the validity of those cultural differences, to appreciating and valuing aspects of their culture, to selective adoption of new attitudes and behaviours, and finally to acculturation, biculturalism, or multiculturalism.<sup>61</sup>



Although acculturation involves adjustment, change, and learning it does not necessarily mean positive personal adjustment has taken place. The sojourner may deem himself to be positively adjusted, but people may actually attribute poor adjustment to him. The acculturative scope includes aspects from the most external and inconsequential (such as eating, clothing styles, etc., though even these may touch on deep values and so find resistance, such as the clothing styles of the Dani in Irian Jaya) to the most consequential (such as world view and ethical values). Thus acculturation may have taken place on certain levels but may never take place on others.

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<sup>59</sup>Bruce P. Dohrenwend and Robert J. Smith, "Toward a Theory of Acculturation," Southwestern Journal of Anthropology 18 (1962): 33-34.

<sup>60</sup>Malcolm McFee, "The 150% Man: A Product of Blackfeet Acculturation," American Anthropologist 70 (1968): 1096-1107.

<sup>61</sup>David S. Hoopes, "Intercultural Communication Concepts and the Psychology of Intercultural Experience," in Multicultural Education, Margaret D. Pusch (ed.) (Chicago, Illinois: Intercultural Press, Inc., 1981), pp. 17-21.



Hollowell notes,

While all acculturation involves psychological readjustments in the sense that new habits must be learned and new attitudes and goals acquired, there is no reason to assume that such readjustments in themselves involve the psychological core of the personality. Surely iron tools may be substituted for those of stone, one style of dress replace another, or a new language be learned without any radical effect upon the personality organization. Let us say then that the culture of one group of people may be influenced in many ways by that of another without the people of the borrowing group undergoing any necessary change in their modal personality structure. Psychological changes of great depth are factors of the acculturation process that, as yet, are little known and need special investigation.<sup>62</sup>

John Berry's study of the literature on six different areas of psychological functioning in the acculturative process showed considerable diversity of potential response from assimilation to alienation. These areas included: language (one of the most important variables,<sup>63</sup> language learning acted as an indicator of the extent to which acculturation had taken place), cognitive style (the general finding is that perceptual, cognitive, and cognitive style test performance shows shift trends to be to dominant culture norms), personality (some individuals and groups move to dominant culture while others move away, while still others achieve a synthesis in their personality, merging elements which are characteristic of both cultures), identity (review of the literature indicates preference for the dominant group in some studies, and in others, identity with actual group membership), attitudes (attitudes toward assimilation, integration, or rejection modes showed that attitudes tended to correlate with the extent to which cultural and psychological characteristics of the two groups were similar, and the extent of contact between the two cultures), and acculturative stress ( stress appears to be higher in unicultural societies than in multicultural societies where support can be more easily found for cultural tradition. Stress is also associated with cultural and psychological characteristics of the cultures in contact).<sup>64</sup>

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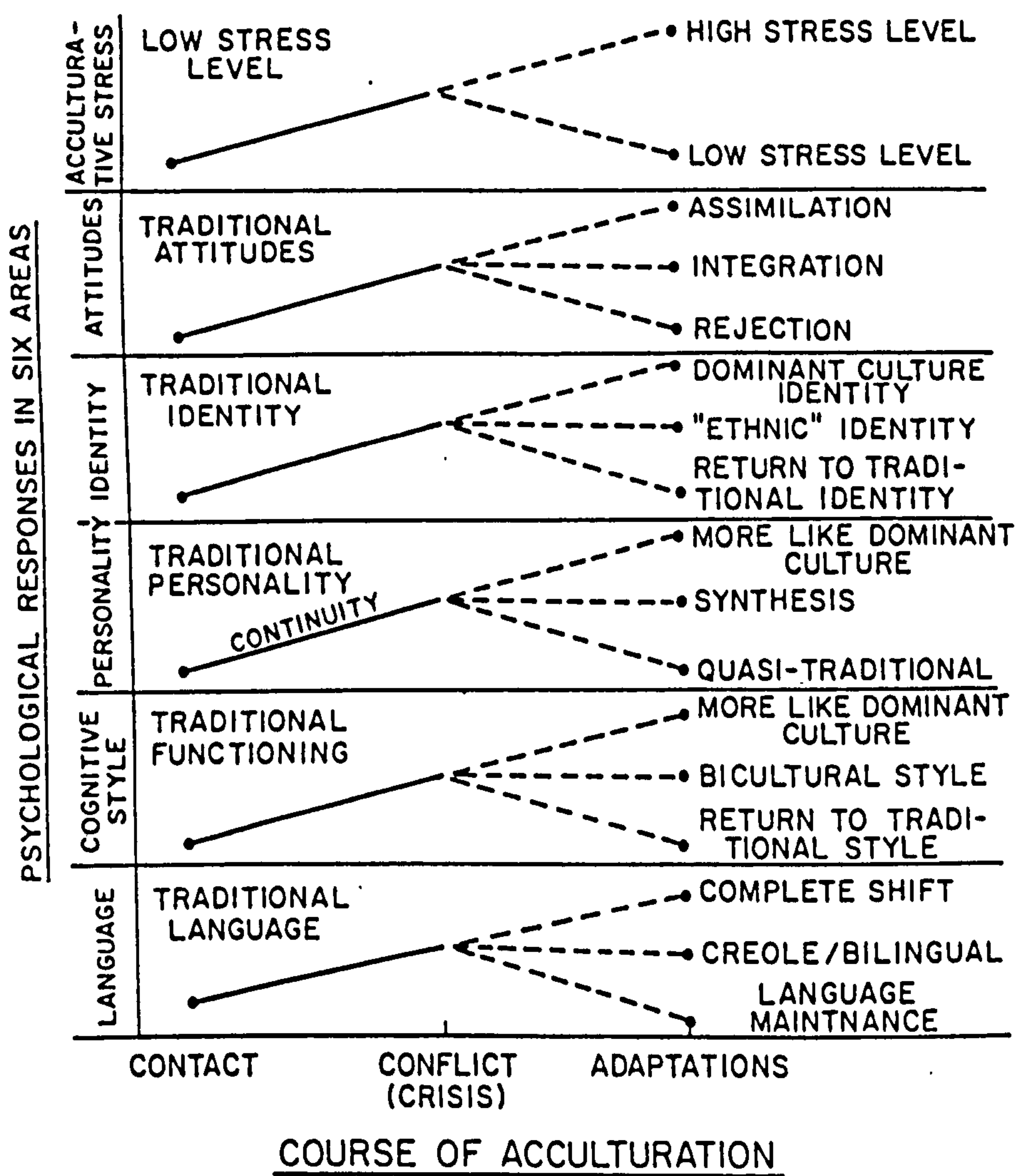
<sup>62</sup>A. Irving Hollowell, Culture and Experience, (Philadelphia, PA: University of Pennsylvania Press, 1955), p. 309.

<sup>63</sup>Young Yun Kim, "Communication Patterns of Foreign Immigrants in the Process of Acculturation," Human Communication Research 4 (1977): 66-77. Young Yun Kim, "Toward an Interactive Theory of Communication-Acculturation," in Communication Yearbook III, Brent D. Ruben (ed.) Vol. III (New Brunswick, NJ: Transaction International Communication Association, 1979), pp. 435-453. L. E. Sarbaugh, "A Systematic Framework for Analyzing Intercultural Communication," in International and Intercultural Communication Annual, Nemi C. Jain (ed.) 5 (Beverly Hills, CA: Sage Publishing, Inc., 1979), pp. 11-22. George A. Barnett and D. Lawrence Kincaid, "Cultural Convergence," in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), pp. 171-194.

<sup>64</sup>John W. Berry, "Acculturation as Varieties of Adaptation," pp. 17-22.



Figure 3: Schematic Diagram of Psychological Responses Over the Course of Acculturation<sup>65</sup>



In literature elsewhere the various potential responses from alienation to bi-culturalism (duality) have been identified under other categories: 1) cultural identity, 2) creative enjoyment, 3) aesthetic appreciation, 4) interpersonal relationships, and 5) levels of commitment. Mansell has depicted the interrelationships of these responses with four stages (alienation to bi-culturalism/duality). See Table 5 on the next page.

As the survey of literature above indicates, the ideal acculturative stance for “sojourners” is bi-culturalism or “duality,” the ability to accommodate a dual perspective resulting in significant membership, satisfying experiences, and effectiveness in life and work within two cultures. *It is possible to hypothesize that the level of intercultural competence is correlated to the extent to which a person has adjusted and adapted in the culture and is becoming bicultural.*

<sup>65</sup>Ibid., [sic], p. 18.



TABLE 5: Profiles of Transcultural Experience<sup>66</sup>

	ALIENATION	MARGINALITY	ACCULTUR- ATION	DUALITY
<i>Cultural Identity</i>	sense of loss; separation; monocultural	sense of division split loyalties; double bind	sense of belonging; identification; monocultural bi-cultural	sense of autonomy; bicultural independence
<i>Creative Enjoyment</i>	use of skills restricted	ritualistic use of skills; impassive	skills match opportunities; innovative	new skills generated; exploratory
<i>Aesthetic Appreciation</i>	limited; comparisons induce conflict	inconsistent; preferences confused	differences and similarities accommodated	valued and meaningful contrasts
<i>Interpersonal Relationships</i>	mainly co-national interaction	acquaintances in both cultures	more close friends from new culture	close alliances with both cultures
<i>Levels of Commitment</i>	incompatibility; desire to return	paradox of gain and loss; uncertain	long-term goal to remain	finds purpose in both contexts; flexible

Definitions of Competence

While the terms “effectiveness,” “success,” and “competence” are commonly interchanged in the literature, the precise meaning is not always given by researchers. Speaking of intercultural communication Ruben notes, “Systematic attempts to define ‘effective,’ ‘successful,’ or ‘competent’ communication behaviour are relatively scarce.”<sup>67</sup> This may be because of a “criterion problem,” failure to identify clearly the criteria of effectiveness and in turn to utilize these as learning objectives in pre-field training.<sup>68</sup> Kennedy and Dreger write of this,

Millions of dollars are spent annually to recruit, train, and maintain this body of overseas personnel [missionaries]. Despite the involvement of a large number of people and the vast expenditures of money, however, little is known about the quality of services being rendered, the elements which make for effective overseas performance, and the personal characteristics and experiences needed to succeed in missionary service. This lack of knowledge regarding the efficacy of the missionary enterprise has prevented the establishment of criteria for measuring overseas missionary performance and, consequently, the selection of predictors of these criteria.<sup>69</sup>

<sup>66</sup>Maureen Mansell, "Transcultural Experience and Expressive Response," Communication Education 30 (1981): 101.

<sup>67</sup>Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," Group and Organization Studies 1 (1976): 335, footnote.

<sup>68</sup>Michael F. Tucker, Screening and selection for overseas assignment: Assessment and recommendations to the U.S. Navy (Denver, Colorado: 1974), pp. 12,15.

<sup>69</sup>Patty Weaver Kennedy and Ralph Mason Dreger, "Development of Criterion Measures of Overseas Missionary Performance," Journal of Applied Psychology 59 (1974): 69.



Yet a clearly defined and comprehensive definition of competence is critically important for selecting, training, and assessing intercultural work effectiveness.

Spitzberg and Cupach have defined competence as “fitness or ability to perform,” noting that the concept has been made to mean “1) knowledge possessed by a social actor; 2) abilities possessed by a social actor; 3) behaviours emitted by a social actor; 4) impressions or attributions made about a social actor; and 5) quality of the overall interactional process, including the numerous inter-related components (e.g. knowledge, motivation, skill, context, outcomes).”<sup>70</sup> This gives a rather wide conceptual spectrum to the term “competence.” Furthermore, the term has been applied to linguistic skills, communication ability, social skills, interpersonal relating capacities, and personal subjective stance toward the social environment. This makes specific definition very difficult. Phillips observed, “Defining competence is like trying to climb a greased pole.”<sup>71</sup> The following discussion will explore the development of the concept of competence, utilizing select definitions.

Spitzberg and Cupach have termed “*fundamental competence*” the “individual’s ability to *adapt* effectively to the surrounding environment over time to achieve goals.”<sup>72</sup> This is a general capacity to adapt and is closely related to Robert D. Williams’s definition: “Competence is a term that connotes fitness, ability, confidence, experienced success in undertakings, realistic optimism, and sustained effort in dealing with one’s physical and social environments.”<sup>73</sup> White also defined it as “fitness or ability to carry on those transactions with the environment which results in its maintaining itself, growing, and flourishing.”<sup>74</sup> White questioned the motivational emphases of drive theory, tension-reduction models, and the libido-focused psychoanalytic model, suggesting instead a competence model wherein the individual is motivated by a subjective sense of need to cause change, developing what he termed “effectance motivation.” This theory postulates that effectance motivation, while initially functioning anatomically in the infant, develops into sense of self and identity through interaction with others. This in turn develops a desire for competence and social effectiveness.

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<sup>70</sup>Brian H. Spitzberg and William R. Cupach, Handbook of Interpersonal Competence Research, p. 6.

<sup>71</sup>G. M. Phillips, “A Competent View of “Competence.” Communication Education, 33 (1984), 24. Cited in Malcolm R. Parks, “Interpersonal Communication and the Quest for Personal Competence,” in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985), p. 172.

<sup>72</sup>Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, p. 35.

<sup>73</sup>Robert D. Williams, “Criteria for Competence,” Psychological Reports 44 (1979): 167.

<sup>74</sup>Robert W. White, “Competence and the Psychosexual Stages of Development,” in Nebraska Symposium on Motivation, M. R. Jones (ed.) 8 (Lincoln, Nebraska: University of Nebraska Press, 1960), p. 100.



Edgar Doll, a laboratory researcher on social competence, defined it as “social adequacy of the individual as a whole (with due regard for age and culture) conceived as a social end result of the physical, physiological, intellectual, habitual, emotional, volitional, educational, occupational aspects of personal growth, adjustment, and attainment which ensue from his constitutional predispositions and environmental impacts.”<sup>75</sup> Doll viewed the construct as 1) functional ability, 2) measurable in terms of maturation, and 3) a dynamic and functional composite of human traits. However, since Doll’s perspective on competence was primarily *trait oriented*, he failed to adequately take *context* into consideration.

Foote and Cottrell made competence synonymous with “ability,” that is, “a satisfactory degree of ability for performing certain implied kinds of tasks.”<sup>76</sup> Their approach was essentially behavioural, focussed on factors such as “health, intelligence, empathy, autonomy, judgement, and creativity.”<sup>77</sup> Empathy and creativity were seen to entail role-taking skills; autonomy was linked to self-concept, while judgement meant making correct and productive decisions. These factors were viewed as essential insofar as they allow one to control his environment. Competence was perceived as dynamic, situationally specific, influenced by past experiences and future aspirations, episodic, and integrative with the goals of others (interactional). These authors were among the earliest to recognize the influence of context and of culture on interpersonal interaction, questioning the adequacy of the trait concept for theory formulation.<sup>78</sup>

Argyris defined interpersonal competence as the ability to correct problems in such a way that interpersonal relationships are productively retained.<sup>79</sup> Positive behaviours for maintaining relationships include 1) owning up to behaviour (“being aware of and accepting responsibility for the behaviour that is manifested”), 2) openness (“pushing back boundaries of awareness and responsibility”), and 3) experimenting (risk taking to create new information).<sup>80</sup> Goldfried and D’Zurilla followed Argyris’ lead in assessing competence to refer to effective responses of the individual “to a problematic situation which alters the situation so that it is no longer problematical, and at the same time produces a maximum of

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<sup>75</sup>Edgar Doll, *The Measurement of Social Competence: A Manual for the Vineland Social Maturity Scale*, (New York: Educational Building, 1953), p. 2.

<sup>76</sup>Nelson N. Foote and S. Cottrell Leonard, Jr., *Identity and Interpersonal Competence*, (Chicago, Illinois: University of Chicago Press, 1955), p. 36.

<sup>77</sup>*Ibid.*, p. 41.

<sup>78</sup>*Ibid.*, p. 46.

<sup>79</sup>Chris Argyris, “Explorations in Interpersonal Competence-I,” *The Journal of Applied Behavioral Science* 1 (1965): 59.

<sup>80</sup>*Ibid.*, pp. 61,62.



other positive consequences and a minimum of negative ones.”<sup>81</sup> In other words, competence is not based so much on traits or even behaviour as on the totality of the situation, including the consequences generated by the behaviour. Thus, competence is operationalized as “effectiveness or adequacy with which an individual is capable of responding to the various problematic situations which confront him.”<sup>82</sup> Competence is deemed to increase as an individual learns to cope with problematic situations.

Two British authors, Connolly and Bruner, defined competence as operatively meaning “knowing how” rather than simply “knowing that,” implying action taken both in adapting to and changing the environment. They conceptualized three steps involved in this process. First, a scheme is formed for action by selecting relevant information from the environment in order to plan action. Second, the sequence of activities is initiated in order to achieve the objectives. Third, learning based on past experience is utilized to optimize the chosen course of action and to formulate new plans.<sup>83</sup>

Bochner and Kelly stated that “competence can be judged by the following criteria: 1) ability to formulate and achieve objectives; 2) ability to collaborate effectively with others; i.e. to be interdependent; and 3) ability to adapt appropriately to situational or environmental variations.”<sup>84</sup> Utilizing nearly parallel concepts to those formulated by Bochner and Kelly, Wiemann identified competence as “the ability of an interactant to choose among available behaviours in order that he may successfully accomplish his own interpersonal goals during an encounter while maintaining the face and line of his fellow interactants within the constraints of the situation.”<sup>85</sup> This is one of the most comprehensive general definitions, recognizing individual traits, goals, behaviours, the situational context, and the needs and goals of others.

Wiemann, with co-author Kelly, expand on this in arguing for pragmatism in conceptualizing interpersonal competence.<sup>86</sup> From a pragmatic perspective competence is

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<sup>81</sup>M. R. Goldfried and T. D’Zurilla, “A Behavioral-Analytic Model for Assessing Competence,” in Current Topics in Clinical and Community Psychology, C. D. Spielberger (ed.) (Cambridge, Massachusetts: Harvard University Press, 1969), p. 158.

<sup>82</sup>Ibid., p. 161.

<sup>83</sup>Kevin Connolly and Jerome Bruner, “Competence: Its Nature and Nurture,” in The Growth of Competence, Kevin Connolly and Jerome Bruner (ed.) (London: Academic Press, 1974), p. 3.

<sup>84</sup>Arthur P. Bochner and Clifford W. Kelly, “Interpersonal Competence: Rationale, Philosophy, and Implementation of a Conceptual Framework,” The Speech Teacher 23 (1974): 288.

<sup>85</sup>John M. Wiemann, “Explication and Test of a Model of Communicative Competence,” in Interpersonal Communication: A Relational Perspective, Ben W. Morse and Lynn A. Phelps (ed.) (Minneapolis, MN: Burgess Publishing Company, 1980), pp. 102.

<sup>86</sup>John M. Wiemann and Clifford W. Kelly, “Pragmatics of Interpersonal Competence,” in Rigor and Imagination, Carol Wilder and John H. Weakland (ed.) (New York: Praeger Publishers, 1981), pp. 286-295.



- 1) "a cognitive process" which includes such traits as motivation or effectuation.
- 2) Competence is "effective performance," not only in ability to do but also in what is done.
- 3) Competence lies in the relational system, and therefore judgements of competence can only be valid in terms of systemic effectiveness, appropriateness, and satisfaction. Outcome is therefore part of the definition. Competence therefore includes such characteristics as
- 4) proper response to the constraints interactants mutually place on one another in order to maximize communication and decision-making (termed "control") and 5) empathy. These latter items relate the interactor to the goals and needs of others.

Locating communicative competence clearly in the realm of *control* as a *process*, Parks viewed competence as "the degree to which individuals perceive they have satisfied their goals in a given social situation without jeopardizing their ability or opportunity to pursue their other subjectively more important goals."<sup>87</sup> In this view competence occurs when the individual has subjectively been satisfied with the accomplishment of goals he has set. Success is seen to be a continuum, wherein individuals may be satisfied with adequate rather than optimal outcomes. Thus competence must also include the component of personal satisfaction with outcome.

Bowerman takes this subjective-perspective on competency considerably further. Basing his theory on the assumptions that people seek to act effectively and that they try to maximize their self-esteem, he offers a formal theory that he calls "subjective competence."<sup>88</sup> He postulates that feelings of competence, effectiveness, and self-esteem "are generated by specific structural relationships among certain kinds of self-referent causal attributions connecting a person to affective experiences," and that "there is a motivation to maximize the level of subjective competence."<sup>89</sup> Components of these self-referent causal attributions include the actor (self), action, the effect of that action, and the resultant affect. How the actor responds depends on the manner in which he or she posits causal elements in the action-effect-affect sequence. There are three components in the potential sequential behaviours:

- 1) an actor approaches (+) or avoids (-), 2) causes (+) or does not cause (-) an action,
- 3) which leads to positive (+) or negative (-) affect.

Thus, for example, in a positive sequence, the actor approaches (+) the prevention (-) of a negative affect (-) (that is, actively preventing an action that would have negative consequences). Perception of consequences and the potential internal subjective tension

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<sup>87</sup>G. M. Phillips, "A Competent View of "Competence." Communication Education 33 (1984), 24. Cited in Malcolm R. Parks, "Interpersonal Communication and the Quest for Personal Competence," in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985), p. 172.

<sup>88</sup>William R. Bowerman, "Subjective Competence: The Structure Process and Function of Self-referent Causal Attributions," Journal of the Theory of Social Behaviour (1978): 45-75.

<sup>89</sup>*Ibid.*, p. 46.



result in preventive action. This sequence is judged competent. An example of a negative subjective competence could include an actor approaching (+) an action that causes (+) a negative affect (-). Factors which affect the choices include: content (belief, observation, expectation, values, etc.), perceived affective consequences of actions, locus of attributions (one's own or other people's), temporal perspectives (past, present, future), evaluative criteria (compared to others or to past performances), generality (commonality) of sequences, certainty of beliefs about the values of actions, level of awareness/ perception, flexibility of the sequence, accuracy of degree of fit of sequence to actor's cognitive map, and extent of personal contact with the environment. Bowerman's argument that people think and behave in such a way as to maximize their subjectively understood sense of competence is a very important theory linking the effects of personal expectations and sense of personal identity to competence. It also helps to explain apparently inscrutable behaviours, such as reactions to self, to other people, and to situational contexts.

Like Parks, McFall argues that competence is not based on traits, that is, observable general attributes which are pan-situational, nor does it reside in performance. But, unlike Parks, who states that competence is personal-subjective, McFall defines competence as "a general evaluative term that reflects somebody's judgement, on the basis of certain criteria, that a person's performance on some task is adequate."<sup>90</sup> In this view, competence is *situational and changing*. It depends on how others see the behaviour in any specific context. As Spitzberg and Cupach state, "*A communicator is competent as he or she is perceived to be competent by self and/or others*. There are likely to be several skills that increase the probability that the impression of competence will be produced. But the skills and behaviours themselves are not intrinsically competent; they provide no guarantee that another will perceive the performance as competent."<sup>91</sup> The argument for this position is that, first, subjective standards of competence are learned and developed in cultural, social, and relational contexts and therefore may not be appropriate or effective in distinctly different contexts, and secondly, if it is possible to be competent in one context and incompetent in another, then behaviour, per se, cannot be the basis for analysis of competence.

This allocentric-subjective view of competence has significant ramifications for defining competence of missionary personnel, especially those who have been in another culture for a length of time and should have become significantly acculturated. National standards of competence will be higher for these than for new missionaries. While novices are given room for growth, a missionary who cannot interact or speak effectively or

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<sup>90</sup>Richard M. McFall, "A Review and Reformulation of the Concept of Social Skills," Behavioral Assessment 4 (1982): 13.

<sup>91</sup>Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, p. 116.



appropriately after long residence is likely to be viewed as unnecessarily incompetent by the people, a view which is certain to have negative effects on ministry.<sup>92</sup>

Roloff and Kellerman propose that salient verbal and nonverbal behaviours observed within an interaction become the targets of judgements of competency.<sup>93</sup> There are standards of performance in the mind of the judge which reflect relationship between the behaviour observed and criteria (which are culturally, socially, and individually set). The authors suggest that a linear relationship exists between the behaviour and the standard, so that as the frequency of behaviour increases so does the perception of how successfully the behaviour meets the standard, or conversely, as the frequency of a behaviour increases so may the perception that the behaviour is less successful in meeting the criterion. The meta-dimensions of communication--eye contact, rate of speech, smiles, and other non-verbal behavioural cues have much to do with attribution of competency.

Some of the other implications related to judgements of competence identified by Roloff and Kellerman include:

1. "Relational partners observing the same interaction may reach different conclusions about each other's competence." The point of this is that a missionary's self-judgement about competence may differ from that of a national's. Furthermore, among nationals there will be differences in judgements of competence. Those who know the missionary best and have established standards in line with their knowledge will judge competence for relevant criteria at a different level than will other nationals who do not know the missionary as well.
2. "Relational partners may enter the interaction with general or personal expectations for each other that diverge from the ones they hold for themselves." Thus, what is inconsequential or nonsalient in one's attributions may be deemed to be a serious violation of expectation in the eyes of the other. This is especially true in the interaction of participants from differing cultural backgrounds.
3. "People view each other from different vantage points." It is difficult to see oneself in an interaction. For example, people watching themselves on video are often embarrassed by their verbal and non-verbal slips and actions.

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<sup>92</sup>However, there are numerous cases of individuals who never competently learned the language nor acculturated yet loved the national people so obviously and served them so generously that they were accepted as adequately competent by the people in those areas of ministry. Eccentrics may not fit well into society and yet may be viewed as passably competent, their eccentricity taken into account by observers.

<sup>93</sup>Michael E. Roloff and Kathy Kellermann, "Judgements of Interpersonal Competence," in Competence in Communication: A Multi-Disciplinary Approach, Robert N. Bostrom (ed.) (Beverly Hills, CA: Sage Publishers Inc., 1984), pp. 179-182.



4. Relational partners may interact yet have different standards of performance for behaviour. Resultant attributions and judgements will be significantly different. This only emphasizes the critical need to understand cultural values, modes and means of communication, world views, non-verbal behaviour, etc.<sup>94</sup>

Cooley and Roach have integrated much of this in applying competence to the intercultural situation.

In a general sense, competence may be defined as the knowledge of appropriate communication patterns in a given situation and the ability to use the knowledge. In a specific sense, competence is composed of individual physiological and psychological abilities and social/cultural knowledge. The social/cultural knowledge serves as data and context for the individual's psychological abilities, which also operate in the context of his or her physiological abilities. This definition recognizes the central role of culture in competence. Culture specifies knowledge and situationally bound rules for use. It also recognizes the role of the individual. Individual members, depending on their own physiological and psychological abilities, use this knowledge and these rules to generate unique behaviours that fall within culturally approved bounds and so can be recognized by other members of that culture as competent. Thus, competence is culturally specific in two senses. The knowledge that an individual has is generated through his or her participation in a cultural group. In addition, the recognition of the degree of competence by an outside observer can only be determined if that observer is also a member of that culture. Knowledge is social property, owned by the community. Ability to use it, on the other hand, is the property of the individual.<sup>95</sup>

Cooley and Roach define *appropriateness* in terms of cultural norms. Since each culture sets forth what rules are appropriate and acceptable within any given situation and also supplies meanings in each situation for possible communicative patterns ("norms of interaction and norms of interpretation"), the choice from among the available strategies for communication determines perceptions of competence.<sup>96</sup> Strategic choices available to the individual depend on the level of understanding he has of the meanings attached to each and his intended goals. The authors also define *situation* culturally as "an event having physical, psychological, and interactional features that make it distinguishable from other situations and that, somewhat redundantly, make it significant to the participants."<sup>97</sup> Meanings attached to situations will differ from culture to culture, as for example, "storytelling" being

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<sup>94</sup>Ibid., p. 179-189.

<sup>95</sup>Ralph E. Cooley and Deborah A. Roach, "A Conceptual Framework," in Competence in Communication: A Multi-Disciplinary Approach, Robert N. Bastrom (ed.) (Beverly Hills, CA: Sage Publishers Inc., 1984), pp. 25-27. Author's emphasis.

<sup>96</sup>Imahori and Lanigan also stress the importance of appropriateness in their definition of intercultural communication competence: "Intercultural communication competence is the *appropriate level* of motivation, knowledge, and skills of both the sojourner and the host-national in regards to their relationship, leading to an effective relational outcome." T. Todd Imahori and Mary L. Lanigan, "Relational Model of Intercultural Communication Competence," International Journal of Intercultural Relations 13 (1989): 277. Emphasis mine.

<sup>97</sup>Ibid., p. 26



instruction in one culture and entertainment in another. *Knowledge* is also culturally specific with the rules for its use. The authors insist that knowledge is social property but the ability to use it is the property of the individual. Any assessment of competence must take into consideration the individual's "ability to use" culturally acceptable interactive skills as well as the performance and attribution of competence made by others within that culture according to their cultural norms and criteria.

### **Issues Related to Competence Assessment**

In their discussion on formulation of criteria for development of theories of competence, Cooley and Roach insist that the following must be included in any theory of competence. First, the theory must account for the *physiological and psychological makeup of the person* being assessed, including cognitive factors, affective constructs (such as emotional state, communication willingness, mood), personality constructs (such as extroversion/introversion, locus of control, etc.), and motivation. Secondly, the theory must provide for *social and cultural constructs*, including social situations, norms, values, beliefs, and attitudes.<sup>98</sup> Thirdly, the theory must specify the *relationship between the constructs*. Cultural values, beliefs, attitudes, and *morés* have their interplay with individuals who all differ in their physiological and psychological make-up and therefore behave differently from one another.<sup>99</sup> Finally, a theory of competence must include the *entire range of communication and interaction situations* that people find themselves in, and must supply principles that explain how people adjust their communication behaviours for situations that are new to them. These four dimensions comprise a solid foundation for much of the theoretical formulation of competence to date. The following discussion on issues will focus on the psychological makeup of the individual involved, the social and cultural constructs, and the relationships between these constructs.

### **Trait vs. State Debate**

#### **"Trait" Constructs**

An on-going debate continues over the issue of whether competence should be conceived of and measured as "traits"<sup>100</sup> (or clusters of traits sometimes referred to as

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<sup>98</sup>Ibid., pp. 25-27.

<sup>99</sup>"...the set of physiological constructs act as a context for the sets of psychological constructs, and the set of social/cultural constructs operate as a context for both the others." Ibid., p. 25.

<sup>100</sup>State and trait concepts are distinguished along four lines. 1) Traits are considered relatively enduring over time; states are relatively short-lived. 2) A trait exists even if its observable referents are not evident, whereas a state is only for the duration of its manifestation. 3) Traits are abstract and inferred since tied to intrinsic character or skills; states are tangible. 4) Traits are the consequence of complex personal factors while states are immediately situational. Brian H. Spitzberg and William R. Cupach, Handbook of Interpersonal Competence Research, p. 53.



dispositions”<sup>101</sup>) or as “states” (“situational realities”). Trait-type conceptions of competence assume that the level of a person’s skills will be relatively stable through time and across situations.<sup>102</sup> Trait-related skills are assumed to be as intrinsic to the individual as character; therefore, a person who performs skilfully in one situation is assumed to be able to perform at a similar level in a similar situation and relatively the same in other situations.

For example, Sypher’s examination of 17 studies and review of the literature on communication competence identified the following items listed in those studies as traits of communication competence: commitment to others/attentiveness, expressions of positive feelings/support, clarification/descriptiveness, agreement/similarity, listening, self-disclosure, self-concept/self-role behaviour, coping with feelings, impression leaving, relaxed, open, dominant, goal attainment/control, nonverbal cueing, interaction management, adapting/flexibility, empathy/perspective-taking, appropriate language.<sup>103</sup> The assumption is that the individual who has these traits will demonstrate the same traits at the same relative consistency across communication situations.<sup>104</sup>

Thus, trait measures are assumed to span place, time, and activity to measure tendencies across contexts, while state measures focus on competence in a specific place, time, or activity. As McFall points out, most of the methods for assessing social skills (as

<sup>101</sup>Cupach and Spitzberg prefer the term “disposition” over “trait” because the latter refers to cross-contextual psychological measures, while “situation” is preferable over “state” because the latter refers to psychological experiences of the moment, neither of which fit the issue of competence measures precisely enough. William R. Cupach and Brian H. Spitzberg, “Trait Versus State: A Comparison of Dispositional and Situational Measures of Interpersonal Communication Competence,” The Western Journal of Speech Communication 47 (1983): 365.

<sup>102</sup>See discussion of the differences between trait and state by Richard M. McFall, “A Review and Reformulation of the Concept of Social Skills,” Behavioral Assessment 4 (1982): 2-12.

<sup>103</sup>Beverly Davenport Sypher, “The Importance of Social Cognitive Abilities in Organizations,” in Competence in Communication: A Multi-Disciplinary Approach, Robert N. Bastrom (ed.) (Beverly Hills, CA: Sage Publishers Inc., 1984), pp. 107.

<sup>104</sup>Cody and McLaughlin state that communication scholars are aware of the fact that “trait measures (as behavioural predispositions) predict overt behaviour *within a limited range of events*.” Summarizing the literature they state, “we know that 1) some personal characteristics (intelligence) achieve greater consistency than others (anxiety); 2) traits can predict to behaviour over time (longitudinally) across similar situations; 3) traits predict behaviors when one averages over performances across a set of events that should allow for variation on the criterion variable; and 4) traits achieve moderate levels of predictive ability across “similar” contexts--in which similarity means that the individuals being assessed agree with the experimenter’s perception that the situation belongs to a ‘common equivalence class’ and agree among themselves on how to scale the behaviors and situations, or that ‘similarity’ exists when one variable of group composition is altered, but not when two or more variables are altered.” It is important to note, however, the number of stipulations identified for situational similarity. Furthermore, the predictive designations are based on cultural commonality, not on cross-cultural dissimilarity. *Thus, while traits may be poorly predictive initially within another culture, as cross-cultural situational codes, norms, roles, etc. are learned, traits will have higher predictive significance.* Michael J. Cody and Margaret L. McLaughlin, “The Situation as a Construct in Interpersonal Communication Research,” in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985), pp. 267. My emphasis.



well as competence in other interpersonal and communication situations) reflect this assumption of temporal and cross-situational consistency.<sup>105</sup> Since trait-type measures are assessing the same general attribute, they must conform to conventional measures for psychometric tests. These requirements call for individual items to be highly correlated, each item also correlating with the total score, and measures showing good test-retest reliability. Different measures assessing the same attribute should have scores that are highly and positively correlated to each other, showing minimal influence from method variance. Factor analysis and generalizability analysis on these measures should yield predictable results. Furthermore, scores on the various tests should be *predictive* of performance in real-life situations. The vast majority of instruments designed to measure competence are psychometric. Few instruments or measurement designs have been constructed to measure situational competence.

However, researchers are increasingly questioning the validity of over-dependence on trait constructs.<sup>106</sup> Stening, for example, states that “though one traditionally held view has been that personality is central to almost all problems of intercultural adjustment, current opinion is that personality is not very useful in predicting intercultural adjustment. The degree of adjustment achieved by the sojourner is likely to depend as much on such factors as the precise nature of his role and the particular environment in which he is placed as upon his personality.”<sup>107</sup> Arguments against the trait construct include the following. First, there is the assumption that communication and interpersonal interrelating is *contextual*. “Behaviours that are socially *proscribed* in one situation may be relationally *prescribed* in another. The notion that interpersonal relationships engender idiosyncratic rule systems suggests the importance of viewing appropriateness as a context-specific phenomenon requiring correspondent operationalization.”<sup>108</sup> This may be one of the reasons why the trait characteristics of flexibility, role taking, empathy, and problem-solving skills arise so often in the listings of traits. Flexibility, for example, allows the individual to select strategic behaviours which are appropriate to the situation, while problem-solving skills give the creativity for coping with different and novel situations.

Secondly, personality theory notes a distinction between *idiographic* and *nomographic* approaches to the study of traits. The nomographic approach seeks for general laws which will fit across contexts, while the idiographic approach recognizes that people’s

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<sup>105</sup>McFall, *idem.*, p. 3.

<sup>106</sup>Michael J. Cody and Margaret L. McLaughlin, “The Situation as a Construct in Interpersonal Communication Research,” *idem.*, p. 263.

<sup>107</sup>Bruce W. Stening, “Problems in Cross-cultural Contact: A Literature Review,” *International Journal of Intercultural Relations* 3 (1979): 289.

<sup>108</sup>*Ibid.*, p. 107. Author’s emphasis.



personalities differ. As Daly points out, people "differ in the degree to which they behave in accordance with their dispositions. Some people's behaviour is highly consistent with their traits; others are far less consistent."<sup>109</sup> Various studies indicate that consistency differences may be found among high vs. low self-monitors, high vs. low private self-consciousness.<sup>110</sup> The problem appears to be heightened when situations differ to the extent they do between home culture and a cross-cultural context. Guthrie, for example, cites research done on Peace Corps Volunteers that showed wide variety of behavioural consistency.

What impressed us most was the noncontinuity of performance from the United States to the Philippines. How well one functioned in the United States did not predict how well he would do in a different cultural setting.... In consultation with psychiatrists, we approved at final selection meetings a half dozen trainees who could reasonably have been dropped as too unstable for the stress of foreign assignments. All of them completed their tours without psychiatric mishap while at least three others without histories of instability had to be evacuated. The numbers do not prove our contention, but they suggest that patterns of instability are rooted in the environment as much as in the dynamic makeup of the individual.

Still dealing in impression, Spencer and I found that Americans who had worked abroad as technical assistants and specialists often commented on how different their American colleagues were in Nigeria or India and how they reverted when they returned to the home campus.

Because the new experience is in so many ways noncontinuous with previous experiences, one's behaviour is probably determined more by recent events and less by long-term patterns and habits.<sup>111</sup>

To the extent that such discontinuity is true, the difficulties of using traits for prediction of behavioural tendency is weakened.

Thirdly, most trait measurements have usually failed to live up to usual psychometric standards, different measures showing very low agreement and generalizability yielding discouraging results. Nor have the measures related strongly to performance in real life.<sup>112</sup> Furthermore, trait characteristics as determined by psychological testing have been shown to be weak in predicting the likelihood of intercultural competence.<sup>113</sup> Dozens of personality

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<sup>109</sup>John A. Daly, "Personality and Interpersonal Communication," in Personality and Interpersonal Communication, James C. McCroskey and John A. Daly (ed.) Sage Series in Interpersonal Communication, 6 (Beverly Hills, CA: Sage Publishers, 1987), pp. 23-24

<sup>110</sup>Ibid. See the 10 studies cited by Daly that show behavioural inconsistency with traits.

<sup>111</sup>George M. Guthrie, "A Behavioral Analysis of Culture Learning," in Cross-Cultural Perspectives on Learning, Richard W. Brislin, Stephen Bochner and Walter J. Lonner (ed.) (New York: Holstead Press Division, John Wiley and Sons, 1975), pp. 104, 106, 97.

<sup>112</sup>McFall, idem., p. 6.

<sup>113</sup>See the following for their assessments of the failures of psychological tests to be able to effectively predict: Kenneth H. David, "Intercultural Adjustment and Application of Reinforcement Theory to Problems of 'Culture Shock'," Trends 4 (1972): 29-33. Michael Brein and Kenneth H. David, "Intercultural Communication and the Adjustment of the Sojourner," Psychological Bulletin 76 (1971): 215-230.



tests exist and have been used, including Cattell's 16 PF, the Minnesota Multiphasic Personality Inventory (MMPI), the California Personality Inventory, the F-Scale, the Dogmatism Scale, the Guilford-Zimmerman Temperament Survey, the Gordon Personal Profile, and the Thematic Apperception Test. Harris states that more than 30 psychological tests and techniques were used and discarded from 1962 to the early 1970's in Peace Corps selection programs because the "actual empirical validity of these instruments... was unimpressive. Test scores on single variables or combinations of variables in multiple regression equations simply did not predict adequately the future success or failure of Peace Corps Volunteers."<sup>114</sup>

For example, Mischel administered personality measures to 41 Peace Corps Volunteers in training for Nigeria. The criterion was based on field-staff rating of the Volunteers. Traits identified as "authoritarianism," "ego strength," and "manifest anxiety" were found to be significantly related to the criteria. However, the best predictor was found to account for only 20 percent of the variation in success, and the results did not replicate in other studies with the Peace Corps.<sup>115</sup>

Guthrie and Zucknick's study of Peace Corps Volunteers in the Philippines found that the strongest predictor, ego strength, accounted for less than 4 percent of the differences in ratings.<sup>116</sup> In Dicken's 1969 study, predictor assessments on 51 Peace Corps Volunteers bound for Peru were obtained before and during training. These were compared with ratings of effectiveness of performance overseas. Eighteen personality measures (including twelve special MMPI subscales developed by Gough, the MMPI Global Evaluation, Ego Strength Scale, General Ability Test, and others) were compared against the main criterion which was a composite of judgements by field supervisors. There were at least two raters for each Volunteer. The most valid predictors were found to be peer ratings, life history, certain training grades, and ratings by a selection board using all data. The MMPI measures of personality and cognitive style had only modest validity, while measures of intellect had

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Norman Dinges and Lorraine Duffy, "Culture and Competence," in Perspectives on Cross-Cultural Psychology, Anthony J. Marsella, Roland G. Tharp and Thomas Ciborowski (ed.) (New York: Academic Press, 1979), pp. 195-196.

<sup>114</sup>Jessie G. Harris Jr., "Identification of Cross-Cultural Talent: The Empirical Approach of the Peace Corps," in Culture Learning: Concepts, Applications, and Research, Richard W. Brislin (ed.) (Honolulu, HI: University Press of Hawaii/East West Culture Learning Institute, 1977), pp. 183.

<sup>115</sup>Walter Mischel, "Predicting the Success of Peace Corps Volunteers in Nigeria," Journal of Personality and Social Psychology 1 (1965): 510-517.

<sup>116</sup>George M Guthrie and Ida N. Zucknick, "Predicting Performance in the Peace Corps," Journal of Social Psychology 71 (1967): 11-21.



almost none. Furthermore, interviews and clinicians' impressionistic interpretations of predictor data showed low validity.<sup>117</sup>

In an attempt to explain why there has been such paucity of results Brislin suggests that in the preparation of standardized personality tests there is the risk that standardization breaks down when unique cross-cultural settings are faced.<sup>118</sup> For example, the MMPI, perhaps the most widely utilized instrument by mission agencies, though actively promoted by James N. Butcher of the University of Minnesota as cross-culturally valid, has had a number of antagonists who have questioned such applicability.<sup>119</sup> Richard H. Dana of the University of Arkansas argues that the MMPI contains assumptions that are significantly problematic. First is its mild ethnocentrism, the assumption that culturally diverse groups are more similar than dissimilar, that world views overlap, and that other groups accept the Euro-American white Anglo vision of reality.<sup>120</sup> Referring to Edward Sampson's description of the American worldview as egocentric (that is, belief in the use of personal control and exercise of personal responsibility to establish an orderly world and satisfactory self-definition) Dana points out that many cultures actually have an "external control-internal responsibility orientation," a clear alternative to the individualistic orientation. However, MMPI assessors tend to hold an individualistic, egocentric world view.

Secondly, Dana contends that the MMPI is an pseudo-etic instrument, because it assumes that the constructs on which it is based (which he contends are middle-class Anglo-American) are universal. "...the MMPI is an etic instrument with limitations that increase as cultures become more dissimilar from American middle-class Anglo behaviour and attitudes"<sup>121</sup> Thirdly, because of this pseudo-etic orientation, the MMPI tends to focus on the generalized "personality of the group, particularly the common structural and ecological characteristics" (a diversified collectivity), and only inadvertently on cultural properties.<sup>122</sup> Noting the same etic orientation, Lonner calls it "the cultural isomorphism of Western-based tests," adding,

Conveniently, psychological tests have often been dichotomized as being either construct-related (theoretical) or criterion-related (atheoretical). Since some

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<sup>117</sup>Charles Dicken, "Predicting the Success of Peace Corps Community Development Workers," *Journal of Consulting and Clinical Psychology* 33 (1969): 597-606. See David, idem, pp. 29-33 for other studies demonstrating the same lack of predictive success.

<sup>118</sup>Brislin, idem, pp. 52-53.

<sup>119</sup>For listing and discussion see Walter J. Lonner, "The Use of Western-based Tests in Cross-cultural Counselling," Division 9 Symposium, "Cross-cultural Counselling," American Psychological Association, (Montreal, Quebec: 1973), p.13.

<sup>120</sup>Richard H. Dana, "Culturally Diverse Groups and MMPI Interpretation: An Etic and Emic Heuristic," 22nd Annual Symposium on Recent Developments in the Use of the MMPI, (Seattle, Washington: 1987), p. 4.

<sup>121</sup>Ibid., p. 12.

<sup>122</sup>Ibid., p. 9.



researchers do not believe that constructs can be assumed to exist everywhere (owing to indigenous thought or value systems, for example), the use of construct-related tests could result in the artificial attribution of an entity, originating in the mind of an "outsider", to one which has been placed on the psychological scale designed to measure it. In the jargon of cross-cultural psychology, this is called "imposing an etic", or assuming a construct to be valid everywhere, rather than evaluating "emically", or from within.

On the personality-interest-values side, there are pathetically few instruments that can lay claim to possible invariant stimuli, invariant constructs, or invariant norms. Aside from projectives--the "right arm of the clinician"--which virtually defy adequate standardization for comparative purposes, there are only a few serious contenders for possible cross-cultural consumption."<sup>123</sup>

Research has found that standardized measures are often inaccurate when applied to non-white ethnic groups, because their language use, assumed knowledge, world view, and group consciousness differ significantly from populations on which the measures were formulated and normed. Out of each culture's historical development certain behaviours and traits are developed as valuable which are not valuable to other cultures. Thus, for example, the hard-driving individuality of the North American businessman counters values of group consensus in Japan. Time values, spatial values, interactional values, and many other values often develop trait characteristics in individuals that are important in each culture.

Interestingly, just at the time when most volunteer organizations began to stop using psychological tests, evangelical missions began to use them more extensively for predicting competence in intercultural life and ministry. A survey done by Johnson and Penner of 75 mission agencies (55 completed surveys, a 73% return) indicated that 76% of them reported that their candidates undergo psychological evaluation. A total of 25 different tests are used for this purpose, though not all by every mission. The Taylor-Johnson Temperament Analysis (T-JTA) was the most common, followed by the Minnesota Multiphasic Personality Inventory (MMPI). Other tests included the 16 Personality Factor Test, the Sentence Completion Test, vocation tests, the Edwards Personal Preference Schedule,<sup>124</sup> the California Psychological Inventory (CPI), the FIRO-B (which studies three interpersonal dimensions: inclusion, control, and affection), the Millon Clinical Multiaxial Inventory (MCMI), the Mooney Problem Checklist, Projective Figure Drawings, the Shipley-Hartford Scale, and the Strong-Campbell Interest Inventory.<sup>125</sup>

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<sup>123</sup>Lonner, *idem*, p. 4, 12.

<sup>124</sup>C. B. Johnson and David R. Penner, "The Current Status of the Provision of Psychological Services in Missionary Agencies in North America," Christian Association for Psychological Studies Bulletin 7 (1981): 25.

<sup>125</sup>For brief descriptions of these instruments as they are used by missions see Larry N. Ferguson, et al., "Essentials and Tools of Psychological Assessment," in Helping Missionaries Grow: Readings in Mental Health and Missions, Kelly S. O'Donnell and Michèle Lewis O'Donnell (ed.) (Pasadena, CA: William Carey Library, 1988), pp. 62-69.



While such personality tests and trait measurements are helpful (since what a person is, knows, and has skills in have significant implications for potential cross-cultural adaptation), assessment must keep the concerns outlined by Dana and by Lonner in mind. Interestingly, a survey that this author has done on the literature produced at the annual Conference on Christian Missions and Mental Health Professionals, held at Pokagon State Park, Angola, Indiana, has not shown any substantial question raised on the built-in biases or potential predictive weaknesses of psychological tests.<sup>126</sup> In fact, missions-associated psychologists such as Dillon endorse these measures, because the MMPI, in particular, in his study showed a significant difference between the means of the missionary sample (n=827) and the norm (of the North American population) and between persevering (defined as fulfilling commitment to a career as a missionary) and non-persevering missionaries.<sup>127</sup> Yet Lindquist warns against just such usage of the MMPI, stating,

...the importance of appropriate norms may be underplayed. Any testing of missionaries or missionary candidate populations must take into account the possible 'confounding' effects of cross-cultural ministry. The psychologist must be careful that the norms used in interpreting the tests match the assessment subject. With the current tests in use, this may be impossible, unless specific norms are developed for missionaries. As an example, many healthy missionaries have elevated (70+) Sc scores on the MMPI. What is the proper interpretation? A rigid and simplistic interpretation would indicate that all are schizophrenic. A more reasonable alternative explanation is that they show an unusual level of creativity and enhanced abstraction.<sup>128</sup>

Studies done by Thayer,<sup>129</sup> Billinsky,<sup>130</sup> and Thayer<sup>131</sup> on missionary populations questioned the predictive value of psychological tests in the *selection process* because of their

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<sup>126</sup>The one exception may be the question raised by Kelly S. O'Donnell at the Eighth Annual Conference, November 1987, when in the appendix of his paper he asked, "What evidence is there for the psychometric adequacy (construct validity) of the tests and test batteries that are used?" The context does not make it clear, however, whether this is questioning the *predictive* validity of the tests or the general adequacy of any test used for psychological analysis. Kelly S. O'Donnell, "Some Suggested Ethical Guidelines for the Delivery of Mental Health Services in Mission Settings," in Helping Missionaries Grow: Readings in Mental Health and Missions, Kelly S. O'Donnell and Michèle Lewis O'Donnell (ed.) (Pasadena, CA: William Carey Library, 1988), p. 479.

<sup>127</sup>David E. Dillon, "Personality Characteristics of Evangelical Missionaries as Measured by the MMPI," Journal of Psychology and Theology 11 (1983): 213-217.

<sup>128</sup>Brent Lindquist, "Misuses of Psychological Assessment with Missionaries," Journal of Psychology and Christianity 2 (1983): 17.

<sup>129</sup>Clarence R. Thayer, "The Relationship of Certain Psychological Test Scores to Subsequent Ratings of Missionary Field Success" (Ph.D. dissertation, University of Pittsburgh, 1951).

<sup>130</sup>John Ballinsky, "Follow-up Study of 200 Candidates of the American Board of Commissioners for Foreign Missions (Boston, Mass: Congregational Christian Church, 1957). Mimeographed and circulated to restricted readership. Cited in Clarence R. Thayer, "The Relationships Between Clinical Judgements of Missionary Fitness and Subsequent Ratings of Actual Field Adjustment," Review of Religious Research 14 (1973): 112, 116.

<sup>131</sup>"The author, C. Thayer, examined 193 missionary candidates who applied to a foreign missionary board by scoring them on two major interest inventories, four adjustment personality tests, and a sentence completion test. On the basis of test scores each candidate was placed into one of four categories. Some years later these candidates, then in missionary service, were rated for overall



conflicting results. Brent Lindquist has also warned of the dangers of using psychological tests on their own to provide criteria of missionary effectiveness or to predict who will or will not do well cross-culturally.<sup>132</sup>

Kealey<sup>133</sup> as well as Kealey and Ruben<sup>134</sup> argue, however, that authors such as David, Harris, Dinges, and others who dismiss the importance and validity of personality variables (because very little correlation has been found between the measures and cross-cultural effectiveness) may be failing to distinguish between the personality *characteristics* themselves and the *measurements* of those characteristics. Citing instruments used (such as personality tests and interview ratings) as predominantly *self-report measures*, and therefore potentially resulting in inconsistency between what people do and what they say, the authors point to some *behavioural measures* (such as Ruben's Communication Competency Scale<sup>135</sup>) which have identified many of the same dimensions, and yet did not have the weakness of self-report measures.<sup>136</sup> On this basis, and on the basis of the recognition across multiple studies of common traits, the authors assert that personality characteristics are important and do identify a "cross-cultural type"<sup>137</sup> who is more likely to be effective cross-culturally.

### **Examples of Traits Related to Cross-Cultural Competence**

Traits "discovered" and listed by most authors tend to be both personality characteristics and behavioural skills without any distinction as to difference in most cases.

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adjustment to the field on a five-step scale by a field secretary of the board who was familiar with their respective records of service. For this board's candidates and this examiner the test-based recommendations had some predictive validity, although the heavily skewed distributions of predictor and criterion scores almost certainly attenuated the predictive validity that was obtained." (Abstract) The largest problem the author found with the predictive value was the fact that there were so few poor performers. The lengthy academic program, the gauntlets of the selection process, and self-selection produced an elite crowd. Clarence R. Thayer, "The Relationships Between Clinical Judgements of Missionary Fitness and Subsequent Ratings of Actual Field Adjustment," Review of Religious Research 14 (1973): 112, 115.

<sup>132</sup>Brent Lindquist, "Misuses of Psychological Assessment with Missionaries," *idem.*, pp. 15-17.

<sup>133</sup>Daniel J. Kealey, "A Study of Cross-Cultural Effectiveness: Theoretical Issues, Practical Applications," International Journal of Intercultural Relations 13 (1989): 389-390.

<sup>134</sup>Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. 1, Issues in Theory and Design (New York, NY: Pergamon Press, Inc., 1983), pp. 168.

<sup>135</sup>Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," Group and Organization Studies 1 (1976): 334-354.

<sup>136</sup>See *behavioural approach* developed by Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," *ibid.*, pp. 334-354.

<sup>137</sup>Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," *idem.*, p. 166-167.



Note the intermixture in the listings of traits drawn from Ruben and Kealey's review of the literature for predictor traits. (See next page)

To these could be added a number of other studies. Benson reviewed 30 studies of overseas effectiveness from which he distilled the following trait dimensions related to adaptation: learning the language, nonverbal communication skills, interaction with nationals, involvement in activities with nationals, friendliness, acting in ways that are socially appropriate, performing well on the job, positive attitudes (tolerance, respect, liking for nationals), satisfaction, and willingness/ability to find way around the culture.<sup>138</sup>

Stoner et. al.'s study of 51 MIT Fellows who worked in Africa and Mauritius resulted in the following factors: cultural empathy, emotional maturity, creativeness, sense for politics, flexibility-rigidity, sense of humour, and marital status.<sup>139</sup>

Furnham and Bochner identified seven skills essential for effective cross-cultural living: 1) perceptive skills, 2) expressive skills, 3) conversation skills, 4) assertiveness, 5) emotional expression, 6) anxiety management, and 7) affiliative skills.<sup>140</sup> These skills form part of the trait dimension in that, it is assumed that once having learned these skills, an individual is able to apply them across situations.

Ruben's communication research has focused on seven dimensions of intercultural communication competence: display of respect, interaction posture, orientation to knowledge, empathy, self-oriented role behaviour, interaction management, and tolerance for ambiguity.<sup>141</sup> These dimensions have been followed up in other studies and found to be significantly valid.<sup>142</sup>

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<sup>138</sup>Philip G. Benson, "Measuring Cross-Cultural Adjustment: The Problem of Criteria," International Journal of Intercultural Relations 2 (1978): 33-34.

<sup>139</sup>James A. F. Stoner, John D. Aram and Irwin M. Rubin, "Factors Associated with Effective Performance in Overseas Work Assignments," Personnel Psychology 25 (1972): 308-310.

<sup>140</sup>Adrian Furnham and Stephen Bochner, "Social Difficulty in a Foreign Culture: An Empirical Analysis of Culture Shock," in Cultures in Contact, Stephen Bochner (ed.) 1 (Oxford, England: Pergamon Press, 1982), pp. 161-198.

<sup>141</sup>Brent D. Ruben, "Guidelines for Cross-Cultural Communication Effectiveness," Group and Organization Studies 2 (1977): 339-341.

<sup>142</sup>For examples see Jolene Koester and Margaret Olebe, "The Behavioral Assessment Scale for Intercultural Communication Effectiveness," International Journal of Intercultural Relations 12 (1988): 233-246. See also Jolene Koester and Margaret Olebe, "The Measurement of Intercultural Communication Effectiveness: An Extension of Ruben's Behavioral Assessment Scales," International and Intercultural Communication Division, Speech Communication Association Annual Meeting, (Chicago, Illinois: 1986), pp. 1-25. Published in Jolene Koester and Margaret Olebe, "The Behavioral Assessment Scale for Intercultural Communication Effectiveness," International Journal of Intercultural Relations 12 (1988): 233-246. The same dimensions were included in the research done by Ruben and Kealey in Kenya. Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 15-47.



TABLE 6: Review of the Literature on Predictor Traits<sup>143</sup>

PEACE CORPS	OVERSEAS BUSINESSMEN	TECHNICAL ASSISTANCE PERSONNEL	MILITARY PERSONNEL	OTHER CROSS-CULTURAL CONTACT
perseverance, patience, tolerance, courtesy, interest in nationals, tech. knowledge, reliability. <i>Harris (1973)</i>	technical skills, high motivation, cultural empathy, political sensitivity, organizational ability. <i>Cleveland, Mangone and Adams (1960)</i>	honesty, respect, sensitivity, interest in nationals, non-judgementalness <i>Arensberg and Niehoff (1971)</i>	sociability, adaptability, empathy, acceptance, patience, intellectual curiosity, morality. <i>Yellen and Hoover (1973)</i>	tolerance, relationship building, intelligence, task orientation, open-mindedness, knowledge, language skills, intercultural sensitivity. <i>Brislin (1981)</i>
passivity, rigidity, and inflexibility associated with overseas failure. <i>Thomson and English (1964)</i>	ability to adjust and relate to people in other cultures. <i>Miller (1972)</i>	empathy, courtesy, motivation and drive, initiative, diplomacy, development, commitment, open-mindedness, personal integrity. <i>Schwartz (1973)</i>	respect, friendliness, interest in local culture, kindness, expertise, sobriety, patience. <i>Mezingo (1974)</i>	ability to deal with psychological stress, ability to communicate effectively, ability to establish interpersonal relationships. <i>Hammer, Gudykunst, and Wiseman (1978)</i>
sensitivity, patience, service oriented, intelligence, initiative, flexibility, extroversion. <i>Guthrie and Zektick (1967)</i>	experience, adaptability, flexibility, technical knowledge, past performance, managerial talent. <i>Business International Corporation (1979)</i>	display of respect, nonjudgementalness, orientation to knowledge, empathy, role behaviour, interaction management, tolerance for ambiguity. <i>Ruben and Kealey (1979)</i>	open-mindedness, empathy, nonjudgementalness, intercultural sensitivity, relationship building, non-ethnocentrism. <i>Gudykunst, Wiseman, and Hammer (1977)</i>	narrow categorisers on their own cultural values are less successful overseas than those who are "broad categorisers." <i>Detweiler (1980)</i>
knowledge, positive self-concept, personal warmth, openness. <i>Maretzki (1965)</i>	technical skill, adaptability/ flexibility, desire to serve overseas, previous overseas experience, diplomacy/tact, empathy. <i>Russell (1978)</i>	flexibility, respect, listening, sensitivity, confidence, frankness, outgoing, self-control, relationship building. <i>Hawes and Kealey (1980)</i>		( <i>Business</i> ) independence, sincerity, integrity, technical knowledge, attitude to non-Americans, wife's opinion, desire to go abroad, ability to train. <i>Ivancevich (1969)</i>

<sup>143</sup>Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," *idem.*, pp. 157.



Mumford's NOAS scale used in the U.S. Navy was based on the following items: language ability, initiative, mobility, cross-cultural friendliness, readiness for new experiences, culinary adaptability, acceptance, appreciation for national customs, equanimity in the face of criticism, and cultural understanding.<sup>144</sup>

Tucker and his associates at the Centre for Research in their study of the Peace Corps (known as "CRE 73") found that there were three very significant variables that successful Peace Corps Volunteers (PCVs) demonstrated. These included considerable social interaction with the people, learning from the people about the culture and the country, use of non-verbal language, and positive emotional response and attitudes toward the culture and people.<sup>145</sup>

Brewster Smith's study of Peace Corps teachers in Ghana found that competent teachers had a coherent core of common psychological characteristics and that competent performance was attained in different ways.<sup>146</sup> He interviewed 44 men and women for four hours each the first year and two and a half hours each the second year. The results were content analyzed and Q-sorts<sup>147</sup> were done. The first factor rating was termed self-confident maturity and included the following high scores: general self-confidence, dependability and responsibility, values and principles affecting work, sense of work importance, readiness to learn, tolerance and understanding, and highly articulate, intellectual formulation of situations and problems. The second factor rating was termed competent teaching in Africa and included such traits as: commitment, teaching competence, tendency to like students, Peace Corps assignment seen as relevant to career, teaching contributing to self and students, sympathetically critical of Ghanaian life and institutions, ability to challenge students to think, and judgement of government policies and actions in terms of the country's needs.

Brewster Smith's third factoring was identified as constructive involvement with Africa. Leading items included: continuing intimate relationships with adult Africans, enjoyment and admiration for Ghanaian style of living, sympathetically critical outlook, friendly

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<sup>144</sup>Sandra J. Mumford, "Overseas Adjustment as Measured by a Mixed Measurement Scale," The Meeting of the Western Psychological Association, (Sacramento, CA.: 1975).

<sup>145</sup>Michael F. Tucker, Improving Cross-cultural Training and Measurement of Cross-cultural Learning, Vol. 1 of the report of supplemental activities conducted under ACTION Contract PC-72-42043 (Denver, CO: Center for Research and Education, 1973), p. 2-8.

<sup>146</sup>M. Brewster Smith, "Explorations in Competence: A Study of Peace Corps Teachers in Ghana," American Psychologist 21 (1966): 558-562.

<sup>147</sup>A Q-sort is a forced choice testing technique that yields ipsative rather than normative data (i.e. data that is self-referenced not comparative). "In this technique an individual is given a set of cards containing statements or trait names to be sorted into piles ranging from 'most characteristic' to 'least characteristic' of himself or herself. The items may come from a standard list, but more often are designed to fit the individual case. To ensure uniform distribution of ratings a 'forced-normal' distribution is used, the respondent being instructed to place a specified number of cards in each pile. Such a distribution can be prepared for any size of item sample by reference to a normal curve table." Anne Anastasi, Psychological Testing, (New York: Macmillan Publishing Co., Inc., 1982), pp. 605-606.



with many Ghanaians, and development of close, personal relationships with students. Significant items on other factor loadings included: control of important situations, genuinely dependable and responsible, value- and principle-oriented, high in initiative, nurturant, self-confident, energetically devotion to deliberate self-improvement, intense involvement, and awareness of personal feelings and motives. The author identified *six primary personality patterns*: 1) interpersonally sensitive maturity, 2) intellectualized future orientation, 3) self-reliant conventionality, 4) dependant anxiety (tied to involvement with Africans), 5) controlling responsibility, and 6) self-actualized search for identity.

Kealey's latest study on Canadian Technical Assistance Personnel validates the dimensions established in his previous study on CIDA personnel.<sup>148</sup> In it expatriots rated most effective by their peers and by researchers showed the following characteristics:

1. *Caring behaviour* demonstrated by:
  - \* Capacity to build and maintain friendly, cooperative, trusting *relationships* with others
  - \* Capacity to show interest in, attentiveness to, *Respect* for others
  - \* *Sensitivity* to local realities, social, political, and cultural
  - \* *Empathy*, ability to read suffering or discomfort on another's face. Competence in perceiving the needs and feelings of others.
2. *Action-orientation* as indicated by:
  - \* *Initiative*, being one of the first to act, make suggestions, propose a plan of action.
  - \* *Self-confidence*, ability to express and demonstrate self-confidence with regard to personal goals and judgement
  - \* *Frankness*, openness in dealings with others
3. "*Out-of-Self*" *orientation* as indicated by:
  - \* *Control*, calmness when confronted by interpersonal conflict or stress
  - \* *Flexibility/openness* to new ideas, other beliefs, or points of view of others
  - \* Perseverance, when tasks get overly frustrating persistence in working for goals
  - \* *Team work*, preference for working with others rather than alone
4. *Low need for upward mobility* as indicated by:
  - \* deemphasis of need for high earnings
  - \* deemphasis of need to live in desirable area
  - \* deemphasis of need for advancement
  - \* deemphasis of need to work in prestigious company
5. *Low security needs* as indicated by:
  - \* lack of worry over tension or job stress
  - \* no need for good physical working conditions
  - \* no need for security of employment
  - \* no need for good working relationship with boss
  - \* no need for well defined job situation
6. *High self-monitoring* as indicated by:
  - \* skill at reading social situations
  - \* skill at regulating behaviour to meet the needs of the situation

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<sup>148</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment (Ottawa, Canada: Canadian International Development Agency, 1979), pp. 1-287.



7. *Social Adroitness* as indicated by:
- \* skill at persuading others to achieve certain goals
  - \* diplomacy
  - \* social intelligence<sup>149</sup>

Robbins Hopkins researched two populations of students in one-year exchange programs, eighty high school students from Uruguay, Argentina, Paraguay, and Venezuela as well as one hundred and twenty-nine high schoolers from the United States. She used the instruments devised by Rubin and Kealey for the 1979 CIDA study,<sup>150</sup> adding the Loevinger Sentence Completion Test. Students, host parents, and organizational sponsors completed questionnaires. As a result of her study the effective student was described as: committed to host family, learns to speak verbal and nonverbal language, takes the initiative to explore the culture and country, experiences success in work, able to adjust to situations, participates in social life of the school, is positive about the experience, demonstrates confidence and initiative, has open communication and close relationships with own family, shows interest in others, makes an effort to respect others, and is open to new ideas.<sup>151</sup>

Not a great deal of empirical research on trait characteristics of missionaries has been done. In one study, Britt obtained a set of variables from a combination of pretraining data which included elements of personality, interpersonal skill, attitudes, and biographical information. This data was gathered from structured interviews, open-ended references, and psychological tests available from each subject's application file. The following significant variables account for 56 percent of the variance of the criterion (success): discipline, emotional resilience, good work habits, social awareness, perseverance, flexibility, and ability to relate well with others.<sup>152</sup>

The development of the Missionary in Action (MINA) check-list designed to measure behavioural attributes specifically relating to the person-social-work relationships of missionaries produced 11 factors along two dimensions, positive and negative. The positive factors were: understanding/accepting people, being organized, being open and flexible to changes, having a positive philosophy of life, leadership abilities, commitment to Christ and desire to share faith, humility and dedication, ability to adjust to cultural demands, concern

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<sup>149</sup>Daniel J. Kealey, "A Study of Cross-Cultural Effectiveness: Theoretical Issues, Practical Applications," International Journal of Intercultural Relations 13 (1989): 416-417.

<sup>150</sup>Hawes, Frank and Kealey, Daniel J., Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, idem., pp. 1-287.

<sup>151</sup>Hopkins, Robbins Sandy, "Defining and Predicting Overseas Effectiveness for Adolescent Exchange Students" (unpublished D.Ed. dissertation, University of Massachusetts, 1982), p. 229-230.

<sup>152</sup>William Gordon Britt III, "Pre-training Variables in the Prediction of Missionary Success Overseas," Journal of Psychology and Theology 11 (1983): 203-212.

for people's needs, and positive home relationships. There were two negative dimensions-- insensitivity to people and inability to cope with professional and social situations.<sup>153</sup>

In spite of the many types of trait measures identified by all these studies (both missionary and non-missionary) there are a number of items for which there is a high degree of consensus. Items most cited include: *empathy, respect (or courtesy), interest in the culture, flexibility, tolerance, professional skill, sociability, initiative, open-mindedness, and positive self-image.*<sup>154</sup>

The resulting profile is of an individual who is truly *open to* and *interested in* other people and their ideas, capable of building relationships of trust among people. He or she is *sensitive to the feelings and thoughts of another*, expresses *respect* and positive regard for others, and is *nonjudgemental*. Finally, he or she tends to be *self-confident*, is able to take *initiative*, is *calm* in situations of frustration or ambiguity, and is *not rigid*. The individual also is a *technically or professionally competent* person.<sup>155</sup>

### **"State" Constructs**

State ("situational," or "molecular") conceptions of competence focus on specific, observable units of behaviour which are situationally based. This construct suggests that people do not, as such, possess certain traits or competencies; rather they *exhibit* those competencies more or less effectively in a particular situation at a particular time. Possibility of predicting future response and activity can only be made in terms of expressed competence by past behaviour in equivalent situations. The most clearly delineated *criterion* for situational competence is that of Goldfried and D'Zurilla, who identified competence as *maximal effectiveness in solving problems while minimizing the likelihood of future problems, thus optimizing immediate situational responses.*<sup>156</sup>

Cody and McLaughlin define a *social situation* (the type of situation this study is most interested in) as a

case in which two or more individuals are interacting within a physical setting, in which the interaction has an observable beginning and ending (defined by mutual monitoring). The behaviour that occurs during the interaction is the *situational performance* (overt behaviour).<sup>157</sup> Situational performance is assumed to be a

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<sup>153</sup>Patty Weaver Kennedy and Ralph Mason Dreger, "Development of Criterion Measures of Overseas Missionary Performance," *Journal of Applied Psychology* 59 (1974): 71.

<sup>154</sup>Daniel J. Kealey and Brent D. Ruben, "Cross-Cultural Personnel Selection Criteria, Issues, and Methods," pp. 165-167.

<sup>155</sup>*Ibid.*

<sup>156</sup>M. R. Goldfried and T. D'Zurilla, "A Behavioral-Analytic Model for Assessing Competence," in *Current Topics in Clinical and Community Psychology*, C. D. Spielberger (ed.) (Cambridge, Massachusetts: Harvard University Press, 1969), pp. 151-196.

<sup>157</sup>Difficulties in trait assessment resulting from situational factors are clearly exemplified in Frank Hawes, "Validating the Selection Weekend Method in the Assessment of Candidates for Overseas Assignment," (Ottawa, Ontario, Canada: unpublished mimeographed manuscript, Canadian International Development Agency, 1977), pp. 1-34.



function of how individuals process input stimuli and interact with the external environment via mental processes.<sup>158</sup>

Brislin refers to "situation" as 1) the external pressures that are part of the culture, that is, in a general sense the combination of factors with which individuals must deal to accomplish their goals, and 2) more specifically, those "aspects of the environment which in combination with individual variables, determine people's behaviour."<sup>159</sup>

Some of these external variables Brislin identified are climate, outer environmental comfort factors, social and legal requirements, number of people with whom one must interact, level of anonymity vs. face-to-face contact, status, traits of other people with whom one interacts, level of situational structure, level of time constraints, level of responsibility, role, presence or absence of behavioural model, presence or absence of ascribed power (ie. deference given to sojourners because of ascribed power or position, which can cause relational difficulties), consequences of behaviour, familiarity of situations, relationships with leaders, and prescriptive vs. proscriptive norms.<sup>160</sup> David lists ten situational variables that have bearing on intercultural interaction: urban vs. rural setting, job conditions, living conditions, host-country friends, contact with other sojourners, health problems, legal status, lack of interests, language difficulties, and opposite-sex contacts.<sup>161</sup> There are a number of classic studies that have been done showing the transformation on human behaviour that situational variables can cause, as for instance the willingness of people to administer electric shocks to victims if there was anonymity and if authority sources took responsibility for the action.<sup>162</sup> Miller and his associates' study showed that compliance-gaining strategies varied significantly in differing situations,<sup>163</sup> while McLaughlin and her associates found that intimacy times consequences times interaction context affect identity management, negotiation, and resistance strategies.<sup>164</sup>

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<sup>158</sup>Michael J. Cody and Margaret L. McLaughlin, "The Situation as a Construct in Interpersonal Communication Research," in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985), pp. 264.

<sup>159</sup>R.W. Brislin, Cross-Cultural Encounter: Face to Face Interaction, (New York: Pergamon Press, 1981), pp. 138-139.

<sup>160</sup>*Ibid.*, pp. 138-170.

<sup>161</sup>Kenneth H. David, "Intercultural Adjustment and Application of Reinforcement Theory to Problems of 'Culture Shock'," *idem*, pp. 13-20.

<sup>162</sup>For examples see Brislin, *idem.*, p. 41-43; Richard A. Detweiler, Richard W. Brislin and William McCormack, "Situational Analysis," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. II, Issues in Training Methodology (New York, NY: Pergamon Press, Inc., 1983), pp. 102-103.

<sup>163</sup>Gerald Miller, et al., "Compliance-Gaining Message Strategies: A Typology and Some Findings Concerning Effects of Situational Differences," Communication Monographs 44 (1977): 37-51.

<sup>164</sup>Margaret L. McLaughlin, Michael J. Cody and Carl S. Robey, "Situational Influences on the Selection of Strategies to Resist Compliance-Gaining Attempts," Human Communication Research 7 (1980): 14-36.

There are four major ways in which people utilize situational knowledge, according to Cody and McLaughlin.

- 1) People use knowledge of situations as a framework for evaluating others.
- 2) People process information; as situations unfold, on the basis of their purposes for being in the situation.
- 3) People elect to enter into, avoid, or change a situation according to their self-in-situation scenarios, self-knowledge, or perceived competencies.
- 4) People use situational knowledge as a guide-line for how to behave.<sup>165</sup>

These points pertain to *perceptual processes*, which, because not all relevant data in a situation can be attended to by an individual, include such cognitive functions as attribution, stereotyping, and “person prototyping” by which an individual organizes understanding of others in the situation. Previous experiences, models, personally derived theories, and observations enable people to know what is appropriate, what the norms and rules are, and how to behave in a particular situation. One of the reasons for culture shock is the lack of a “map” for cultural situational cues, regulations (rules), and appropriate behaviour. Detweiler asserts that “an understanding of situational influences is absolutely essential for the interculturalist....”<sup>166</sup>

Argyle and his associates<sup>167</sup> have identified nine main features of social situations that interactors need to be aware of which, though the authors did not have this in mind, would help sojourners in their intercultural social communication. First, people come to situations with *goals*, needs, and wants, which in turn affect how they attempt to satisfy these needs in the interaction. In some cases, the level of need is low; in others high. These goals are constrained to other features of the situation including rules, roles, norms, sequential structures, and the goals of others in the situation. This concept of goal-drive helps to predict and explain how and why people behave as they do. Secondly, each situation has *rules* (or shared beliefs about what conduct is acceptable) which regulate behaviour in order to accomplish goals. These rules, of course, are culturally, socially, and to some extent situationally determined. Thirdly, individuals within a social situation have certain *roles* which may be formal, informal, or which may change (i.e. from teacher role to counsellor role). Roles carry expectations about actions, beliefs, and values, all of which impinge on situational interaction.

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<sup>165</sup>Michael J. Cody and Margaret L. McLaughlin, "The Situation as a Construct in Interpersonal Communication Research," in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985) p. 265.

<sup>166</sup>Richard A. Detweiler, Richard W. Brislin and William McCormack, "Situational Analysis," in Handbook of Intercultural Training, idem., p. 104.

<sup>167</sup>Michael Argyle, Adrian Furnham and Jean Ann Graham, Social Situations, (Cambridge: Cambridge University Press, 1981), p. 6-9.



Fourth, situations have *repertoires of elements* or activities. Thus a person in a doctor's office acts differently from the way he would act on the ball field. The intercultural context may result in embarrassment when the repertoire of elements is not known and behaviour is inappropriate. Fifth, the repertoire of elements usually comes in a *sequence*. Leave-taking comments usually come at the end rather than at the beginning of an interactional sequence. Rituals and formal situations especially tend to follow sequence. Sixth, *concepts* related to meaning and attribution, either as personal constructs or group constructs, enable people to categorize others (relational designations--family, friends, neighbours, enemies; age designations--children, elderly, etc.; professional designations--doctors, lawyers, etc.; sexual designations--wife, girl/boy friend, etc), enable people to learn the rules of games, and enable individuals to learn religious concepts, etc. "In order to deal with complex stimuli or problems or to perform skills it is necessary to possess the relevant concepts."<sup>168</sup> Finally, *environmental constraints* (boundaries, space, light, temperature, etc.), *levels required of language and speech competency*, and requisite *situational skills* are all important features. "Indeed, difficulty in social situations may be seen as a direct function of social skill -- the more the person has the relevant skill in dealing with the situation, the less the difficulty experienced."<sup>169</sup>

Detweiler, Brislin, and McCormack developed a situational descriptor list of 106 terms, which was subjected to bubble-sort technique by one hundred and one subjects from three very different regions of the United States and differing ethnic groups (to eliminate cultural generalizability). The sort resulted in nineteen groups of descriptive terms.<sup>170</sup> These were presented to three teams which chose category labels for each group. From these a test was developed wherein the nineteen categories were to be applied to fifteen common situations: a doctor's office, a funeral, a party, taking a test, etc. Thirty-eight subjects took this test. Results showed that the descriptors did indeed appear to be valuable for describing and differentiating situations. The same test was then applied to ten students from ten different countries attending Drew University, utilizing four of the situations from the first test. There were found to be significant differences between these international students and

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<sup>168</sup>Michael Argyle, "Social Skills and the Analysis of Situations and Conversations," in Handbook of Social Skills Training, Vol. 2, Clive R. Hollin and Peter Trower (ed.) International Series in Experimental Social Psychology, 12 (London, England: Pergamon Press, 1986), p. 199.

<sup>169</sup>Ibid., p. 200.

<sup>170</sup>These nineteen categories included: Negative Effects (unavoidably unpleasant), Authority, Structure (organized), Visibility (people exhibit overt behaviour), Social Norms (behaviour is standardized), Goals (purposeful), Social Interaction, Pleasure, Relationship, Social Differentiation (social, ethnic, role differentiation), Classification (sex, age, etc.), Individual Orientation (individual identifiable and in control), Competition, Ability, Work Orientation, Clarity, Stimulation, Flexibility, and Temporality. Richard A. Detweiler, Richard W. Brislin and William McCormack, "Situational Analysis," in Handbook of Intercultural Training, idem., pp. 105-123; descriptor listing, p. 113.

the Americans who took the first test. Analysis of variance was conducted for each situation separately, and the researchers discovered that the internationals did not accurately perceive the North American (and university) culture in which they were immersed. *The study suggests that apparently successful involvement (functional competence) within cultural situations does not necessarily mean that understanding has taken place.*

While the importance of context is generally accepted, actual situational assessment and prediction measures are so complex that little empirical situational research has been done.<sup>171</sup> Molecular assessment requires measurement of five very complex interactions: 1) the specific behavioural unit, 2) the situational context, 3) the behavioural objectives, 4) the various behavioural outcomes, and 5) characteristics of each person who is behaving.<sup>172</sup> Because of this complexity, while researchers acknowledge the impact of context, they tend to measure for traits. Foote and Cottrell, for example, stated that "interpersonal competence is neither a trait nor a state. Competence denotes capabilities to meet and deal with a changing world, to formulate ends and implement them."<sup>173</sup> They then proceeded to identify competence along *trait* dimensions: health, intelligence, empathy, autonomy, judgement, and creativity.<sup>174</sup> Daly picked this problem up by pointing out that systematic conceptualizations of situations are not well developed and when the role of situational variables is taken by itself, research indicates that these do not account for much more variation than do traits. "“Situational characteristics alone are not much better at predicting outcomes than are traits.”<sup>175</sup>

### **The Contribution of Interactionalism**

It is evident that assessment of competence cannot unilaterally be made along trait or state dimensions alone, but that both must be taken into consideration since each mutually

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<sup>171</sup>Some exceptions are Wiemann's dyadic interactions and Brandt's use of reactions to videotaped dyadic interactions. John M. Wiemann, "Explication and Test of a Model of Communicative Competence," in Interpersonal Communication: A Relational Perspective, Ben W. Morse and Lynn A. Phelps (ed.) (Minneapolis, MN: Burgess Publishing Company, 1980) pp. 100-116. See also David R. Brandt, "On Linking Social Performance with Social Competence: Some Relations Between Communicative Style and Attributions of Interpersonal Attractiveness and Effectiveness," Communication Research 5 (1979): 223-237. Argyle and his associates have done quite a bit of situational research. Michael Argyle, Adrian Furnham and Jean Ann Graham, Social Situations, (Cambridge: Cambridge University Press, 1981).

<sup>172</sup>McFall, *idem.*, p. 8.

<sup>173</sup>Nelson N. Foote and Leonard S. Cottrell, Jr., Identity and Interpersonal Competence, p. 49.

<sup>174</sup>*Ibid.*, p. 41.

<sup>175</sup>John A. Daly, "Personality and Interpersonal Communication," in Personality and Interpersonal Communication, James C. McCroskey and John A. Daly (ed.) Sage Series in Interpersonal Communication, 6 (Beverly Hills, CA: Sage Publishers, 1987), p. 20.



influences the other.<sup>176</sup> Spitzberg and Cupach suggest three ways in which the two interact. *First*, “traits contribute to situational competence insofar as they enhance the general *propensity* of an individual to be perceived as competent in a given episode.” Thus, “cross-cultural-type” traits are more likely to enable cross-situational capacity. *Second*, “certain traits may contribute to competence attributions in such a way that one’s partner may come to perceive competence on the basis of specific situational behaviours.” For example, a person may be perceived both to *be* empathetic (which is a trait) and to be *behaving* empathetically in a crisis situation. *Third*, some traits may lead to competence in certain situations but not in others.<sup>177</sup> It can also be added that regardless of traits, some situations are highly constraining regardless of the behavioural propensities of an individual; others are more open, allowing behavioural selection as desired.

One perspective on this interplay between traits and context is called *interactionalism*, which views competence from a cognitive-phenomenological framework. Rather than attempting to identify an individual’s determinant traits or specific environmental forces, effort is made to synthesize all the ways in which individuals and environments interact. A basic assumption of interactionalism is that “traits, by themselves, offer little predictability about behaviour. When combined with situations, however, the interaction between a trait and situation can account for a sizeable chunk of the behavioural variation.”<sup>178</sup> This synthesis of the many interactions reveals successful as well as unsuccessful dealings with the social world. Assessment of these interactions enables the individual to increase his level of competency.<sup>179</sup>

An interactional approach is more likely to be successful at predicting future intercultural competence, a particularly difficult task. The most comprehensive way to attempt such prediction, according to McFall, is to “a) identify the most relevant and critical life tasks for the person or group; b) conduct a task analysis for each task; c) obtain a representative sample of each individual’s performance of the task; d) establish task-specific criteria for evaluating competent performance; e) evaluate the performance samples; and f) summarize, integrate, and interpret the results.”<sup>180</sup> While this is a more complex approach to

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<sup>176</sup>For example, Wrubel et. al. use the illustration of “burn-out” among professionals. These highly competent people have become “incompetent.” Their traits and skills may be the same but the physical and emotional exhaustion caused by the situation has contributed to low morale and poor performance. Judith Wrubel, Patricia Benner and Richard S. Lazarus, “Social Competence from the Perspective of Stress and Coping,” in *Social Competence*, Jeri Dawn Wine and Marti Diane Smye (ed.) (New York: Guilford Press, 1981), p. 64.

<sup>177</sup>Brian H. Spitzberg and William R. Cupach, *Interpersonal Communication Competence*, p. 93.

<sup>178</sup>Daly, idem., p. 21.

<sup>179</sup>Wrubel, et. al. idem., p. 64

<sup>180</sup>McFall. idem., p. 18,19.

selection and prediction, the results of this in conjunction with trait measurements will probably be more successful than primary reliance on psychological tests.<sup>181</sup>

### **Cognitive Social Learning Concepts**

Triandis identifies three major paradigms in social psychology: *first*, a paradigm which employs a stimulus-response contiguity and reinforcement approach; *second*, a paradigm that centres around cognitive determinants; and *third*, a paradigm that discloses the perspective of sociologists and anthropologists and emphasizes customs, norms, roles, and the subject's self.<sup>182</sup> The first paradigm will not be considered in this review of the literature, while both the second and third will be. In this section, some of the primary concepts and emphases of cognitive learning will be considered.<sup>183</sup>

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<sup>181</sup>Richard A. Detweiler, Richard W. Brislin and William McCormack, "Situational Analysis," in Handbook of Intercultural Training; idem., p. 103.

<sup>182</sup>Harry C. Triandis, "Culture Training, Cognitive Complexity, and Interpersonal Attitudes," in Cross-Cultural Perspectives on Learning, Richard W. Brislin, Stephen Bochner and Walter J. Lonner (ed.) (New York: Holstead Press Division, John Wiley and Sons, 1975), pp. 46-47.

<sup>183</sup>There are multiple schools and theories, including (in brief),

1. *Personality Theories* (see discussion above on the trait vrs. state debate and interactionalism)
2. *Symbolic Interactionism* is focused on determining how situations are actively staged, negotiated and defined by the interactants using symbolic transformation through the use of symbols. Symbols (mental representations of objects with socially agreed-on meanings) form the basis of social relationships, especially through verbal and non-verbal communication. These symbols are the basis for self-images and alter-images. Furthermore, they enable individuals to perceive things from the perspectives of others. Symbolic Interactionism holds that humans are both products and creators of their social world. Herbert Blumer, "Symbolic Interaction," in Culture and Cognition: Rules, Maps, and Plans, James P. Spradley (ed.) (San Francisco, CA: Chandler Publishing Co., 1972), pp. 65-83.
3. *Ethnomethodology* attempts to find the rules and rituals of situations. For cross-cultural implications of rules theories see W. Barnett Pearce and Richard L. Wiseman, "Rules Theories," in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), pp. 79-88.
4. *Ethogenics* believes that self-monitoring is the essential component of all social action.
5. *Kelly's Constructive Alternativism* views people are "naive scientists" who try to understand, predict, and control by gathering facts and observations about the world around them, fitting these together into beliefs (or hypotheses, constructs), testing the hypotheses against real life and strengthening or discarding them as needed. George A. Kelly, The Psychology of Personal Constructs, (New York: W.W. Norton and Co, 1955).
6. *Attribution Theories*, similar to Constructive Alternativism, have identified a great deal about how people make attributions (causal beliefs) about themselves, others, and the world. These attributions made form the basis for beliefs as to what causes others to behave as they do. Individuals also attempt to control the attributions others make about them. For one discussion on this see Alan L. Sillars, "Attribution and Communication," in Social Cognition and Communication, Michael E. Roloff and Charles R. Berger (ed.) (Beverly Hills, CA: Sage Publications, 1982), pp. 73-106.
7. *Script Theory* holds that situations are a chaos of events, lacking meaning, reason, or pattern unless one has developed cognitive scripts allowing definition of situations. Experience in life produces "vignettes" either through episodes (such as hitting one's thumb with a hammer), through categories ("hitting one's thumb means clumsiness"), and hypotheses (logical extensions that become the basis for abstraction, inferences, and logic extension). Scripting allows for automatic ("mindless") activity that does not take cognitive effort; lack of scripts for cross-cultural contexts result in stress as effort is made to make sense of the situations.



Joseph Forgas points out that in recent interactionist theories of personality there is a growing emphasis on the cognitive processes of behaviour *vis. a vis.* situational contingencies.<sup>184</sup> Individuals make efforts to gain information in order to formulate strategies for interacting successfully with others. Cognitive social learning theories attempt to define how such information is acquired, gives meaning, is organized, and is utilized in interactions.

### **The Nature of Social Symbolic Ideation**

What each understands as reality is socially constructed and differs from culture to culture even though all individuals use sensory input.<sup>185</sup> In brief, the process whereby sensory input is selectively screened, categorized, and developed into conceptual and symbolic ideation is as follows. Sensory stimulus moves from the object or event via the sense organ(s) to the brain, where it is transformed into a "percept" (the mental representation of the object or event). Because the environment produces far more stimulus than the brain can adequately process, much of that stimulus is ignored, while specific stimuli or percepts are concentrated on.

Each percept that is concentrated on has recognizable attributes (e.g. loud, shiny, large, heavy, etc.). On the basis of these attributes percepts tend to be formed into equivalence categories or "concepts." An individual has formed a concept when there is common response to various objects that are different, yet have been placed together for specific use. For example, coffee, filter, pot, water--all different, placed together for making coffee--demonstrate a concept. Concepts are made of objects, events, and the relationships between them. Some of the relationships these concepts form include means-end, cause-effect, spatial, part-whole, and function. Relational concepts are important because they in turn permit the formation of symbols and the development of symbolic thought.<sup>186</sup>

At this level the difference between the immediacy of concepts and the more abstract symbols is important. Concepts (and their base percepts) are tied to stimulus inputs.

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8. The *Dramaturgical Approach* perceives social interaction as drama, wherein scripts, roles, words, gestures, and other processes for interaction are chosen to make an impression on others, resulting (according to the effectiveness of the performance) in positive or negative attributions and results. "Saving face" and "putting on a front" are part of this perspective.

For general discussion on these approaches see Barry R. Schlenker, *Impression Management* (Monterey, CA: Brooks/Cole Publishing Company, 1980), p. 22-43 as well as Michael Argyle, Adrian Furnham and Jean Ann Graham, *Social Situations*, (Cambridge: Cambridge University Press, 1981).

<sup>184</sup>Joseph P. Forgas, "Episode Cognition and Personality: A Multidimensional Analysis," *Journal of Personality* 51 (1983): 35.

<sup>185</sup>For discussion on this see Peter L. Berger and Thomas Luckman, *The Social Construction of Reality*, (Garden City, New York: Doubleday and Company, Inc., 1967).

<sup>186</sup>James P. Spradley, "Foundations of Cultural Knowledge," in *Culture and Cognition: Rules, Maps, and Plans*, James P. Spradley (ed.) (San Francisco, CA: Chandler Publishing Co., 1972), pp. 3-38.

Symbols, however, may represent both physical phenomena and/or abstractions. For example, the use of the word “tree” in Luke 19:4 (Zacchaeus “climbed a sycamore-fig tree to see him...”) is a symbol (“tree”) tied to its physical representation. When one reads the sentence it is clear that a literal tree is intended. The same could not be said of Rom 11:24 where the symbol “tree” is used to represent the Gentiles as well as Israel. This latter abstraction produces a vast new array of potential ideation.

The more abstract symbolic thinking becomes, the more difficult to process and communicate without the use of signs. Symbols are one type of sign. The other two types include indexes which identify *natural relationships* among phenomena (“honey is sticky,” “apples come from apple trees,” etc.) and icons which identify *formal relationships* between phenomena and representative likenesses (i.e words, pictures, etc.). Symbols identify *arbitrary relationships* between the stimulus object and the referent (which the sign refers to). Symbols then do not have to share likeness to what they represent any more than the word “lamb” has formal similarity to the woolly, four-legged mammal. Symbols to be created and used interchangeably must follow rules (instructions on how to behave in a certain way). These rules allow symbols to be tied to their referents and are thus given meaning.

Symbols are particularly powerful because they enable individuals to respond to historical events, respond to political events occurring on the other side of the country or world, anticipate and prepare for the future, and communicate with others. Since most human interaction is symbolic, the verbal and nonverbal activities of others must be interpreted symbolically. This is possible because of the rules and codes which are recognized, accepted, and utilized in communication within a culture. Movement to another culture causes varying degrees of communication breakdown because of differences in codes and meanings.

## **Perception**

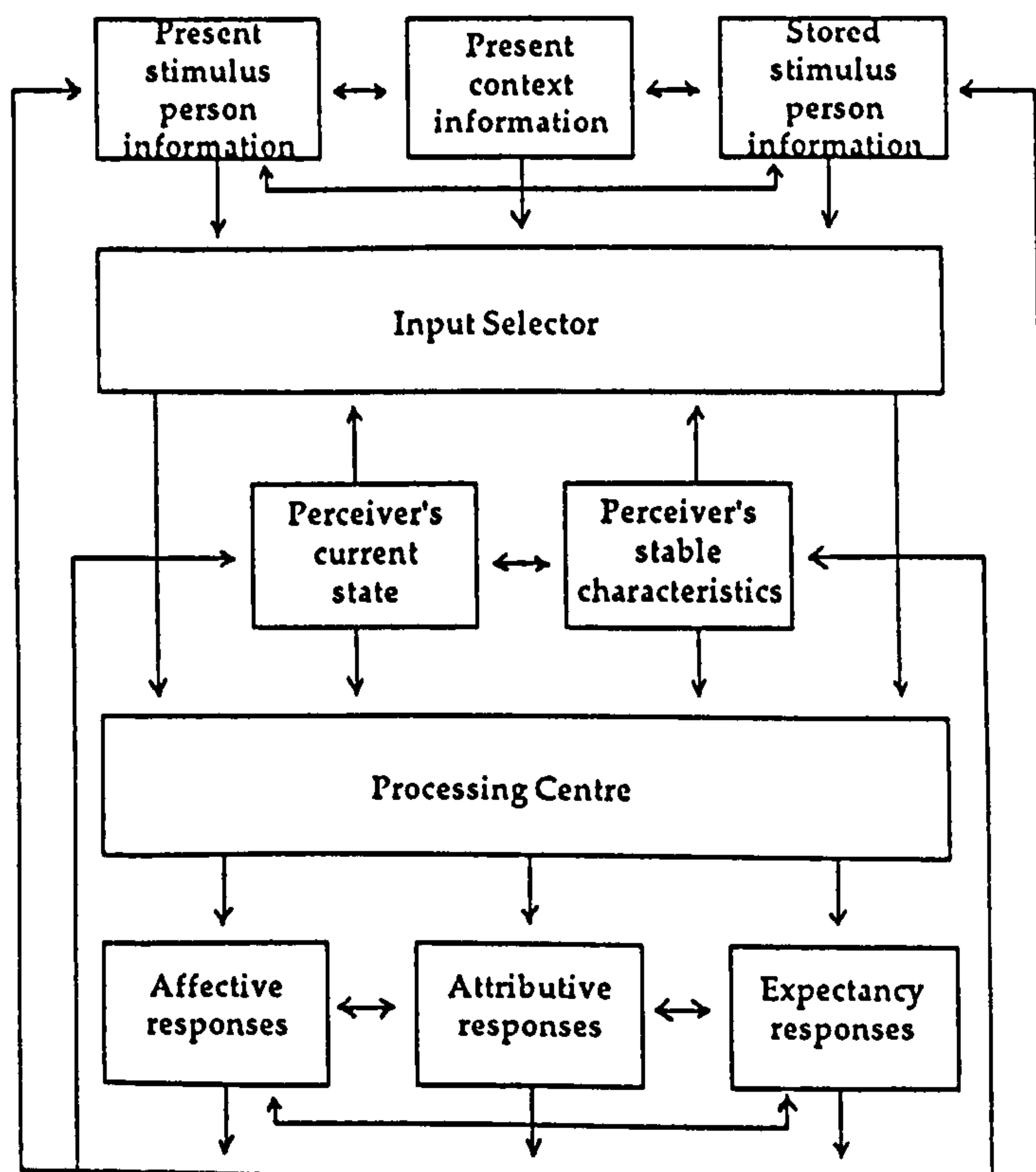
In order to function competently, the individual must select the most salient information from the sensory barrage. Initial encounters will result in selection of the most obvious information--physical features, behavioural cues, verbal content. Other factors that determine information selected include informational frequency, recency, primacy, and reinforcement value. Furthermore, elements which condition learning include the other's affective valence, similarity to the observer, and other relational properties. Cues that are believed to predict the outcomes of the interaction tend to be the ones most attended to. In order for such predictions to be accurate and valuable in helping an individual to know how to relate to the other, cues must be applicable and accurate. Yet, the processing of such information may result in perceptual errors. “Research shows that accuracy in interpersonal judgements is variable. Individuals may fail to monitor the immediate environment or do so intermittently; fail to register significant events; possess limited, superficial, or ambiguous



information--all conditions which encourage projection or distortion through stereotypes, personal beliefs, and other perceptual processes.”<sup>187</sup> Obviously, the rate of perceptual error may rise precipitously within a different cultural context where not only are there verbal differences, but differences in gestures, body characteristics, meanings in residential arrangements (house, yard, community, etc.), temporal meanings, spatial meanings, ceremonial meanings, and other cultural elements with their meanings. Yet, as Newmark and Asante point out, perceptual capacity and skills can be developed through learning and experience with culture as a variable in the nature and development of the process.<sup>188</sup>

Warr and Knapper have developed a model of person perception (“the processes involved in knowing the external and internal states of other people”) which is very helpful. While it is difficult to represent perceptual processes diagrammatically because of potential oversimplification, schematic representations help to understand the process.

**Figure 4: Model of Person Perception<sup>189</sup>**



<sup>187</sup>Peter Trower, "Fundamentals of Interpersonal Behaviour: A Social-Psychological Perspective," in Research and Practice in Social Skills Training, Alan S. Bellack and Michel Hersen (ed.) (New York: Plenum Press, 1979), p. 5.

<sup>188</sup>Eileen Newmark and Molefi K. Asante, "Perception of Self and Others: An Approach to Intercultural Communication," in International and Intercultural Communication Annual, N. C. Jain (ed.) (Church Falls, VA: Speech Communication Association), p. 59.

<sup>189</sup>Peter B. Warr and Christopher Knapper, The Perception of People and Events, (London, England: John Wiley and Sons, 1968), p. 16-26.

In this diagram perceptual information flows generally from top to bottom, although the process is complex in that there is actually a dynamic, to-and-fro interaction between the varying components. As mentioned earlier, not all information can be processed; we learn to select only certain aspects about other people. The mechanism which governs what stimuli are to be selected is called the *input selector*.<sup>190</sup> The input selector utilizes three types of information: present person stimulus information, stored stimulus person information, and present context information. *Present person stimulus information* has to do with selected information about the other person in the social interaction. Two types of variables are associated with perceiving personal characteristics. The first is called “covert distal” perception while the second is “overt distal” perception.<sup>191</sup> Overt distal variables are elements which are directly observable in another person (such as features, eye colour, clothes worn, etc.) Covert distal variables, on the other hand, are more inferential, such as character, values, habits, desires, etc. Overt variables often lead to assumptions about covert characteristics.

*Present context information* refers to the social, physical, and behavioural context in which the person is perceived. Situational information has a powerful effect on how perceptions are formed. People are assessed both in connection with environmental factors as well as in conjunction with others who are within the situation. Interactions with one person may change dramatically at the arrival of another person. *Stored stimulus person information* is data stored in memory about previous interactions with the individual, what he or she has done on other occasions, what people have said about him or her, previous affective responses to that person, etc. Some of this may be in stereotypic form. Interaction occurs on the basis of stored assumptions based on stereotypes previously formed about that individual or his “class.”

The perceiver is influenced in perceptual selection by at least two factors: personal stable characteristics and the perceiver’s current state. The *perceiver’s current state* refers to

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<sup>190</sup>Hoopes comments, “Sights, sounds, smells, tactile sensations, tastes are continuously presented to us. This bombardment goes on all our waking hours, so much so that we are forced to screen most of it out. This screening process, called ‘selective perception,’ is critical to our mental health. Without it we would quite simply go mad. But what criteria do we use for this screening? How do we decide what to hear, see, smell, taste, or feel of all the myriad possibilities? For the most part, our culture or our cultural environment tells us. ...Clearly many things affect the selection process: environment, personality, and immediate need; but the basic framework is provided by culture. We learn to make these distinctions, to select out what we do from our experience, principally according to the instructions we receive from our culture. These instructions come from all the spoken and unspoken norms we began learning from the moment we were born.” David S. Hoopes, “Intercultural Communication Concepts and the Psychology of Intercultural Experience,” in Multicultural Education, Margaret D. Pusch (ed.) (Chicago, Illinois: Intercultural Press, Inc., 1981), pp. 14.

<sup>191</sup>“Distal” variables are located in the stimulus (i.e. the other individual) in contrast to “proximal” variables that our senses immediately detect (i.e. the smell of perfume).



affective state (anger, joy, pleasure, fear, etc), health and vitality, primary role being enacted, and status, all of which also affect stimuli attended to in interpersonal interaction. *Stable characteristics* have to do with personality, cognitive styles, age, sex, attitudes, religious affiliation,<sup>192</sup> social class, habits, and other characteristics. Thus, women may tend to notice things that men do not and vice versa (i.e. colour of hair, clothing styles, etc.); the elderly may take account of age and health in ways that younger observers do not; habit may result in certain clues habitually looked for but not others. The authors state, "It seems likely that the stable characteristics of a perceiver act upon the input selector by specifying types of judgement which are to be made as well as by alerting it to particular sets of cues."<sup>193</sup>

This, of course, has particular significance on intercultural communication. Yehuda Amir's study of perceptual articulation in three Middle Eastern cultures demonstrated that child-rearing practices<sup>194</sup> (which in part produce these "stable characteristics") have strong

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<sup>192</sup>Warr and Knapper, referring to the limited research in this area noted, "...there are some documented accounts of how judgements may differ according to religious ideology. Long has provided evidence suggesting that Catholics tend to show greater acceptance of other people than do Protestants. But even without this small number of research reports it is clear that religious beliefs and values may be associated with particular forms of judgement; anyone familiar with professional and social rivalry between religious groups in large cities can have no doubt about this." *idem*, p. 217.

<sup>193</sup>*Ibid.*, p. 19.

<sup>194</sup>Yehuda Amir writes, "Patai (1973), in summarizing the studies on child-rearing practices in the Arab and Moslem countries, points out that even though these investigations cover widely separated areas such as Lebanon, Egypt, Palestine, Algeria, Morocco, and Iraq, they disclose striking similarities; and he concludes that all this suggests a general all-Arab pattern of childbearing.

The role of the father in the family is a major characteristic of this pattern. Although he remains aloof from his children, at least until they are of school age, the father is severe, stern, and authoritarian in his relationship toward his children. Another pervasive feature of Middle Eastern type of child-rearing is corporal punishment. All those who observed family life in this area first-hand agree that the incidence and severity of corporal punishment administered to children is much greater than is the case in the Western world. In many cases this form of punishment extends into late adolescence. The child thus learns to subordinate his own ego and personal interests to the authority of the father and the interest of the family.

Prothro also found that among Moslems, as compared to Christians, threats and physical punishment were used more frequently by both mothers and fathers. Independent activity and responsibility were fostered or expected to a lesser degree, and successful accomplishment was much less rewarded among Moslems than among Christians. Prothro's study reveals another characteristic of Middle Eastern societies, which tends to limit the development of perceptual articulation, namely, the emphasis on dependency and cultural continuity and the discouragement of personal autonomy.

Summarizing the above cited studies and other ethnographic data available on the subject, the following picture emerges: child-rearing practices in the Middle Eastern family are intended to preserve accepted traditional values of the group. Children remain totally dependent on parental authority for many years which may last into late adolescence or even longer. Restriction of the child's autonomy coupled with a lack of attention to his personal needs is salient. The mother reacts in a stereotyped and undifferentiated manner to signs of the infant's discomfort. There is a minimum of verbal interaction between mother and child. As a result he lacks stimulation in general and of his curiosity in play behaviour in particular. The child is perceived merely as an extension of the parental ego lacking individuality. All this is typical of a tradition-oriented society, which is characterized by a lack of individualization and differentiation of social roles." Yehuda Amir, "Perceptual Articulation in Three Middle Eastern Cultures," *Journal of Cross-Cultural Psychology* 6 (1975): pp 408-409. (In-text citations not included).

influence on the extent to which cognitive differentiation<sup>195</sup> develops. "Research findings indicate that articulated versus global perceptual styles are consistent features of an individual's cognitive interactions with his environment. Such consistency suggests that socialization during the growing-up period plays a major role in molding cognitive style."<sup>196</sup>

The *processing centre* is the set of "decision rules" developed by the perceiver which help to determine how the individual will act or react strategically. These rules are of two sets. *Inference rules* are inferences gained from single inputs, such as "he is smiling; he must be happy." Each perceiver has developed a large set of inference rules by which he can make attributions, many of these rules developed by cultural norms. Smiling at a stranger in one culture (or subculture) may have entirely different connotations from the same action in another culture. *Combination rules* act as "prescriptions about inference from compound sets of individual inputs."<sup>197</sup> These compound rules tend to act synergetically, that is, the fusing of the many discrete inference rules into one set of gestaltic material acts as a component to enable decision making. These rules are often combined with *probabilistic inferences*: "he's probably kindly; she is probably wise; etc." These inferences and combination rules tend to function subconsciously, even as much of the rest of the system tends to occur almost instinctively without self-conscious reasoning at every point.

There are three more components which can also be problematic in intercultural interaction. The first is the *affective* component which strongly influences every interaction. Interest, sympathy, liking, respect/honour, fear, anger, hostility, resentment, anxiety, etc. are affective responses that first act on attributive judgement and then affect decisions pertaining to interaction. Considerable research has been done on the influence of "attraction" on social interaction.<sup>198</sup> If a person determines that another individual is attractive, he will likely form further impressions that fit this framework.

The second component is the *expectancy* component. When certain attributions have been formed about an individual, requisite expectations are attached to those attributions. Warr and Knapper point out that expectations have both input and output functions,

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<sup>195</sup>"The differentiation hypothesis is based on the principle that the tendency in human development is from the global to the particular, from the less differentiated to the more differentiated. An example of this is the ability to separate psychological functions such as perceiving from feeling, thinking from action, the self from that which is outside the self, as well as the ability to integrate effectively complex subsystems." Ibid., pp. 406-407.

<sup>196</sup>Ibid., p. 406.

<sup>197</sup>Ibid., p. 21.

<sup>198</sup>See, for example, David R. Brandt, "On Linking Social Performance with Social Competence: Some Relations Between Communicative Style and Attributions of Interpersonal Attractiveness and Effectiveness," *Communication Research* 5 (1979): 223-237.

D. Byrne, *The Attraction Paradigm*, (New York: Academic Press, 1971).

D. Byrne, "Interpersonal Attraction and Attitude Similarity.," *Journal of Personality and Social Psychology*, 62 (1961): 713-715.



determining how perceptions are formed as well as how attitudes and behaviour are developed. Thus, if the attribution “trouble-maker” is applied to an individual, expectations will look for and probably confirm that attribution. Expectations also tend to assume cross-situational consistency, so that when people act one way in one situation and another elsewhere we are surprised. Finally, expectations tend to be applied to individuals according to their roles, status, age, sex, and similar categorical variables, assuming action in accordance with these categories.

The third component is the *attributive*. Impression formation is closely related to attribution of certain characteristics to others. Attribution arises out of categories that an individual has developed. In order to understand the powerful influence of attribution in intercultural communication, categorisation must be understood, as well as the “antecedents of attribution,” stereotyping and prejudice.<sup>199</sup>

### Categorization.

“To categorize is to render discriminably different things as equivalent, to group the objects and events and people around us into classes, and to respond to them in terms of their class membership rather than their uniqueness.”<sup>200</sup> These categories become “the means by which we sort, define, understand, and store our experiences.”<sup>201</sup> Categories are established by the values that are learned both individually and culturally. As Bruner and his colleagues state it,

“The categories in terms of which man sorts out and responds to the world around him reflect deeply the culture into which he is born. The language, the way of life, the religion and science of a people; all of these mold the way in which a man experiences the events out of which his own history is fashioned. In this sense, his personal history comes to reflect the traditions and thought-ways of his culture, for the events that make it up are filtered through the categorical systems which he has learned.”<sup>202</sup>

There are two broad types of categories, according to Bruner et. al.-- “identity categories” and “equivalence categories.” The former, *identity* categories, define things in terms of “forms of the same thing.” The latter *equivalence* categories place “discriminantly different things as the same kind of thing or amounting to the same thing.”<sup>203</sup> There are a further three broad groupings within equivalence categories: affective, functional, and formal.

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<sup>199</sup>See chapter 5, “The Antecedents of Attribution” in Harry C. Triandis, *Interpersonal Behavior*, (Monterey, CA: Brooks/Cole Publishing Co., 1977), p. 135-163.

<sup>200</sup>Jerome S. Bruner, Jacqueline J. Goodnow and George A. Austin, “Categories and Cognition,” in *Culture and Cognition: Rules, Maps, and Plans*, James P. Spradley (ed.) (San Francisco, CA: Chandler Publishing Co., 1972) p. 169.

<sup>201</sup>David S. Hoopes, “Intercultural Communication Concepts and the Psychology of Intercultural Experience,” *idem.*, p. 12.

<sup>202</sup>Bruner, et. al., p. 177.

<sup>203</sup>*Ibid.*, pp. 170,171.

*Affective* categories evoke a common affective response and therefore are grouped together. *Functional* categories are based on equivalence on the basis of function (i.e. "tools"). *Formal* categories are developed by specifying properties or attributes needed to belong to a specific class of objects (such as in scientific classification).<sup>204</sup>

Brislin identifies 8 bases out of which categories are formed: 1) differences that are easily seen, 2) deviation from what is familiar, 3) the functions that categories serve in society, (one such function, for example, is maintenance of control over ethnic interaction, 4) orientation to maximizing the advantages of being members of one's own group, 5) tendency to project one's values on others, 6) similarity of beliefs, 7) standardization of desirable and undesirable traits in people, resulting in approach-avoidance standards, and 8) individual classifications based around "salient" (prominent, important) items.<sup>205</sup>

Categories are formed by individuals to accomplish five objectives: 1) to reduce environmental complexity, 2) to identify objects, 3) to reduce constant learning since new objects can be identified as part of a group or class, 4) to know in advance what action is appropriate and what is not appropriate, (for example, the classification of "poison" helps to know what to do with it), and 5) the ordering and relating of events (i.e. "matches cause fires.").<sup>206</sup>

Researchers have discovered that individuals differ greatly in the ways in which they categorize, some allowing for wide variation in categories and others for very narrow categories. It has been surmised that how one learns and how developed categories function for the individual have much to do with category width.<sup>207</sup> A narrow categoriser allows for only very similar things; a wide categoriser allows for more discrepant things. This includes not only items, but belief and value concepts. Difficulties in a cross-cultural context arise especially around values. In studies done by Detweiler

analysis indicated that narrow categorizers, as opposed to broad categorizers, tend to make stronger and more confident attributions of intention, responsibility, and undesirable personal traits to the person of a different culture who causes negative outcomes. The narrow categorizer seemed to categorize the behaviour on the basis of his/her own cultural values and evaluate its "goodness" or "badness" from that perspective. The broader

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<sup>204</sup>Eleanor Rosch argues that categories may be analogic rather than digital in nature (and therefore more gestaltic) and that they may consist of a *prototype* or best example of the category, with other category members on a continuum from that best example. Eleanor Rosch, "Universals and Cultural Specifics in Human Categorization," in Cross-Cultural Perspectives on Learning, Richard W. Brislin, Stephen Bochner and Walter J. Lonner (ed.) (New York: Holstead Press Division, John Wiley and Sons, 1975), pp. 177-206.

<sup>205</sup>Richard W. Brislin, Cross-Cultural Encounter: Face to Face Interaction, (New York: Pergamon Press, 1981), pp. 73-79.

<sup>206</sup>Bruner et. al., p. 178-179.

<sup>207</sup>Richard A. Detweiler, "Culture, Category Width, and Attributions," Journal of Cross-Cultural Psychology 9 (1978): 263.



categorizer, however, was unconfident and withheld inferences in the same situation.<sup>208</sup>

Because narrow categorisers are unwilling or unable to accept broader meanings or interpretations of behaviour, they tend to be less flexible, more rigid, and less able to take the uncertainties and ambiguities of the cross-cultural context.

Individuals tend to emphasize the discrete items that they have identified in set categories and ignore the differences. This is because of the human need for *definiteness and distinction* as well as *consistency and stability* of meaning in the mass of perceptual stimuli.<sup>209</sup> Categories become *schemata*<sup>210</sup> or cognitive structures which direct perceptual activity defined by Neisser as

that portion of the entire perceptual cycle which is internal to the perceiver, modifiable by experience, and somehow specific to what is being perceived. The schema accepts information as it becomes available at sensory surfaces and is changed by that information; it directs movements and exploratory activities that make more information available, by which it is further modified.... A schema is not merely like a format; it also functions as a *plan*....<sup>211</sup>

Crockett notes that schemata organize patterns of expectation and that therefore new information about an individual will tend to be interpreted in terms of an invoked schema.

...once a schema is invoked to account for the behaviour of a particular person, or for the relations between the person and others, it promotes the attribution to that person of a variety of related sentiments, abilities, motives, aspirations, character traits, and other qualities.<sup>212</sup>

He defined constructs as responsible for providing discriminations and specific beliefs.

Schemata, in turn, organize the constructs and provide for patterns among beliefs.<sup>213</sup>

O'Keefe and Delia hypothesize that interpersonal schemata are invoked not so much on the

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<sup>208</sup>Ibid., p. 283.

<sup>209</sup>Fred L. Casmir, "Stereotypes and Schemata," in Communication, Culture, and Organizational Processes, William P. Gudykunst, Lea P. Stewart and Stella Ting-Toomey (ed.) International and Intercultural Communication Annual, 9 (Beverly Hills, CA: Sage Publications, 1981), p. 54.

<sup>210</sup>Roy Freedle refers to culture in the same way as "a set of interactive schemata for habitual ways in which interacting individuals can dynamically discover what each person intends to convey given the immediate context and shared presuppositions of the culture." Roy Freedle, "Introduction to volume 2," in New Directions in Discourse Processing, Roy O. Freedle (ed.) Vol. 2 (Norwood, NJ: Ablex, 1979), p. xii.

<sup>211</sup>U. Neisser, Cognition and Reality: Principles and Implications of Cognitive Psychology (San Francisco: W.H. Freeman, 1976), p. 43. Cited in Casmir, *ibid.*, p. 56.

<sup>212</sup>W. H. Crockett, Impressions and Attributions: Nature, Organization, and Implications for Action. Presented at the annual meeting of the American Psychological Organization, Washington, D.C., 1977, p. 11. Cited in Barbara J. O'Keefe and Jessie G. Delia, "Impression Formation and Message Production," in Social Cognition and Communication, Michael E. Roloff and Charles R. Berger (ed.) (Beverly Hills, CA: Sage Publications, 1982), p. 42.

<sup>213</sup>O'Keefe and Delia, *ibid.*

basis of personality traits as on contexts and interactional goals, wherein the perceiver "acts more as a social psychologist attempting to elaborate a pattern of concepts for explaining, understanding, and predicting the other's behaviour within a range of contexts."<sup>214</sup>

The capacity to categorize is important. Casmir argues that it is not possible to meaningfully respond to one's environment if there is no such structure to be able to integrate the information.<sup>215</sup> Therefore these structures and categories have powerful usefulness as guides for behaviour in changing situations. This is where the strengths of categories lie.

Some of the negative consequences of stereotypic thinking (which is one kind of category) identified by Brislin include the following.<sup>216</sup> *First*, where there is already an existing stereotype, additional information received tends to be more readily accepted and with less evidence than deserved. The stereotype is also strengthened. A cyclical effect takes place. For example, if people are thought to be stingy, any experience of that (even if misunderstood or incorrect) strengthens the stereotype, which in turn makes examples easier to find. *Second*, when people have been categorized into types, individuals met for the first time tend to be placed into one of these categories. The generalized information in that category is in turn applied to the individual. Both sojourners and host nationals meet each other with categorisation (stereotyping) and the information supplied by that stereotype.<sup>217</sup> Louise Kidder writes of the frustration faced by sojourners in India who were pegged by nationals in stereotypes from colonial times.<sup>218</sup> The problem runs both ways. Sojourners arrive with their stereotypes. Many westerners have to contend with the suspicion of having C.I.A. connections. These stereotypic designations often do not pass until both know the other(s) as individuals in their own right in the communities they are in.<sup>219</sup>

*Third*, trait designations tend to be made on the basis of stereotypes. If an individual belongs to a certain category, it is assumed that traits associated with that category belong to him or her. It becomes easier to move from category to trait in trying to understand people then from their traits to categories. Obviously, there are dangers for communication

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<sup>214</sup>Quoted in O'Keefe and Delia., *ibid.*, p. 43.

<sup>215</sup>For more on the role of schemata see Dean E. Hewes and Sally Planalp, "There is Nothing as Useful as a Good Theory...", in Social Cognition and Communication, Michael E. Roloff and Charles R. Berger (ed.) (Beverly Hills, CA: Sage Publications, 1982), pp. 120-122.

<sup>216</sup>Brislin, Cross-Cultural Encounter, *idem.*, pp. 79-91.

<sup>217</sup>An interesting study on stereotypes held by Chinese and American exchange students on each other was done by Michael H. Bond, "Mutual Stereotypes and the Facilitation of Interaction Across Cultural Lines," International Journal of Intercultural Relations 10 (1986): 259-276.

<sup>218</sup>Louise H. Kidder, "The Inadvertent Creation of Neocolonial Culture: A Study of Western Sojourners in India," International Journal of Intercultural Relations 1 (1977): 48-60.

<sup>219</sup>Although this does not always happen, especially on the part of host-country individuals who have their societal context to maintain stereotypes. See research on Greeks and Americans in Greece done by Harry C. Triandis and Vasso Vassiliou, "Frequency of Contact and Stereotyping," Journal of Personality and Social Psychology 7 (1967): 316-328.



breakdown in doing this. *Fourth*, people tend to minimize their own differences and maximize difference between themselves and the out-group, often to the point of exaggeration and distortion. Examples of this come from various wars, where the enemy is portrayed with names and traits that are blatantly distorted as part of maximizing differences and inducing unified hatred and fear of them.<sup>220</sup> *Fifth*, the use of categories increases under stress because it provides a simplified means of organizing salient information. Brislin quotes Pruitt,

...people tend to become rigid and repetitive under stress. They think up fewer new alternatives and are, therefore, more likely to persist in old, maladaptive approaches. Experimenters (for example Driver, 1962) have also found that dimensionality of thinking reduces under stress, in other words, that individual objects (in Driver's thesis, other nations) seem less complicated the greater the stress. In addition, some authors have speculated that stress causes a reduction in the number of consequences considered in evaluating a potential course of action.<sup>221</sup>

The danger, then, is that stress in adaptation or the long range stress of living in another culture can "force" individuals to live in accordance with stereotypes brought with them or developed in the early weeks and months of living in the culture. Competence may be reduced sharply because life and work may fall into line with distorted perceptions of reality.

*Sixth*, certain categories, especially ethnic and racial, are extremely resistant to change and are so pervasive that even conflicting pieces of information can be integrated without realizing the logical incompatibility. An example is of categories held by anti-Semitic people who view Jews as out to get as money as possible; when confronted by evidence of Jewish contribution of large sums to charity, they may argue that that is for gaining influence. *Finally*, and rather importantly, people tend to compare new information with pre-defined categorical material and when a comparative fit is found they make decisions on how to act. They do not continue on to find the best possible alternatives. This "hasty" approach to behavioural decision-making is less than optimally competent especially within a cross-cultural context and the demands of the work-place.

Triandis points out that it is important to distinguish *autostereotypes* or what people think about their own group from *heterostereotypes* or what people think about other groups as well as the part that is played by *personal attributions* that are one's own from those that are *social attributions* held by the larger group.<sup>222</sup>

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<sup>220</sup>William A. Scott, "Psychological and Social Correlates of International Images," in International Behavior: A Social-Psychological Analysis, Herbert C. Kelman (ed.) (New York: Holt, Rinehart, and Winston, 1965), pp. 71-103.

<sup>221</sup>D. Pruitt. "Definition of the Situation as a Determinant of International Action." In K. Helm (ed.), International Behavior: A Social-Psychological Analysis. (New York: Holt, Rinehart, and Winston, 1965, pp. 395-396). Brislin, *idem.*, p. 86.

<sup>222</sup>Harry C. Triandis, Interpersonal Behavior, (Monterey, CA: Brooks/Cole Publishing Co., 1977), p. 137.

## Attributions

“Attribution refers to judgements made about the behaviour of others as well as to judgements about one’s own behaviour.”<sup>223</sup> Heider originally raised the question as to how individuals reason backward from observed behaviour they see in others to the causes of their behaviour, that is, how they attribute behavioural cause.<sup>224</sup> Motives, intentions, personality traits, and reasons for action are attributed as part of the effort to not only understand and create cognitive order, but also to enable prediction and appropriate response to the actions of others. Sillars describes three tasks undertaken in the process of attribution: *description* or “labelling the personal traits or intentions of an actor”, *explanation* or “attributing causality for an action” (examples: “stable-personal factors such as ‘ability,’ unstable-personal factors such as ‘effort,’ stable-situational factors such as ‘task difficulty,’ and unstable-situational factors such as ‘luck’”<sup>225</sup>), and *prediction*.<sup>226</sup>

Harold Kelley has suggested a covariation model for the process of attribution using an ANOVA cube. Where an individual has opportunity to observe the other on multiple occasions, attributions are made by observed covariation on four criteria: 1) *distinctiveness* (where behaviour is similarly determined by the absence or present of an entity), 2) *consistency over time* (each time the entity is present, the individual’s response is the same or nearly so), 3) *consistency over modality* (responses to an entity are the same even under differing circumstances), and 4) *consensus* (differing individuals respond in the same way to the same stimulus).<sup>227</sup> Because there are two dimensions--the personal (trait) and situational--attributions may be made either to trait (that is, when there is low distinctiveness, low consensus, and high consistency a personal trait is inferred by the behaviour), or to situation (that is, when behaviour occurs on the basis of/or in spite of the presence or absence of certain conditions).

However, Sillars points out that the subjective elements of the covariate model (the first three items listed above) tend to be weakly used by people and the consensus element hardly at all. This occurs first because of the power of prior expectations causing people “to imagine relationships among things when no correlation exists and to overlook relationships

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<sup>223</sup>Brislin, *idem.*, p. 91.

<sup>224</sup>Fritz Heider, "Social Perception and Phenomenal Causality," Psychological Review 51 (1944): 358-374.

<sup>225</sup>Described also in these categories by Fritz Heider, The Psychology of Interpersonal Relations, (New York: John Wiley, 1958).

<sup>226</sup>Alan L. Sillars, "Attribution and Communication," in Social Cognition and Communication, Michael E. Roloff and Charles R. Berger (ed.) (Beverly Hills, CA: Sage Publications, 1982), p. 74.

<sup>227</sup>Harold H. Kelley, "Attribution Theory in Social Psychology," in Nebraska Symposium on Motivation, David Levine (ed.) Current Theory and Research on Motivation, 25 (Omaha, Nebraska: University of Nebraska Press, 1967), p. 197.



that do exist,"<sup>228</sup> and second because of human tendency to use affective and subjective criteria rather than objective criteria. People are not nearly as "rational" in their attributions as they assume themselves to be. This has been discovered in research related to attributional biases. For example, decision theory and cognitive psychology have found "people to be quite inept at all but the simplest inferential tasks--and sometimes even at those--muddling through a world that seems to let them get through life by gratuitously allowing for a lot of error."<sup>229</sup> People appear to settle for the first acceptable explanation that comes to mind, rather than the best.

A second problematic bias is that of salience (or vividness of impression). Often information that is vibrant, either through interest format, emotivity, imagery-provocation, or proximately salience, whether or not it has actual value as a cue, may be focused on and utilized for attribution. This may be because vivid information is more easily remembered and retained.<sup>230</sup> Cross-cultural contexts provide abundant salient information, which misunderstood may provide inaccurate attributions for future interactions.

A third, and very powerful, bias is the "fundamental attribution error." That is, that while "changes in the environment are almost always caused by acts of persons in combination with other factors, the tendency exists to ascribe the changes entirely to persons."<sup>231</sup> In other words, people fail to recognize situational factors in making attributions for behaviour, assuming that people are more consistent than they are from situation to situation. As noted earlier, and as Sillars points out, "some scholars have argued that trait psychologists as well as lay psychologists have been victimized by the fundamental attribution error in overestimating the degree of personal consistency that typically occurs in behaviour."<sup>232</sup> The "fundamental attribution error" may occur because behaviour is more salient (vivid) than contextual factors, because it is easier (and more cognitively comfortable) to ascribe error to personality than to situation, and because trait dispositions tend to be overgeneralized.

A fourth bias relates to actor-observer attributional differences, wherein actors attribute their (mis)actions to situational causes, while observers attribute the same behaviours to stable personal dispositions.<sup>233</sup> For example, Taylor and Jaggi found that

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<sup>228</sup>Sillars, *idem.*, p. 79.

<sup>229</sup>B. Fischhoff, "Attribution Theory and Judgement Under Uncertainty." In J. H. Harvey, W. J. Ickes, and R. F. Kidd (eds.), New Directions in Attribution Research (Vol. 1). (Hillsdale, NJ: Erlbaum, 1976), p. 421. Cited in Sillars, *ibid.*, p. 81.

<sup>230</sup>*Ibid.*, p. 82.

<sup>231</sup>Fritz Heider, "Social Perception and Phenomenal Causality," p. 361

<sup>232</sup>Sillars, *idem.*, p. 88.

<sup>233</sup>E.E. Jones and R. E. Nesbitt, "Actor and the Observer: Divergent Perceptions of the Causes of Behavior," in Attribution: Perceiving the Causes of Behavior, E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nesbitt, S. Valins, and B. Weiner (Morristown, NJ: General Learning Press, 1972),

Hindus in South India attributed favourable actions of their own group to personal characteristics but negative actions to situational factors; however, they attributed favourable actions of Muslims to situational factors and unfavourable actions to personal characteristics. Muslims were found to make the same types of self attributions and attributions to the Hindus.<sup>234</sup> Reasons for this may be because the observer focuses on the actor, tending to exclude the background, while the actor is more conscious of the context in which he functions. Secondly, self-esteem attributes negative actions to the environment for personal protection. Finally, the actor is more conscious of past contexts and the present context affecting his behaviour in a way that the observer cannot be.<sup>235</sup>

Peter Ehrenhaus posits that “intercultural communicators are particularly likely to commit the ‘ultimate attribution error’”<sup>236</sup> because of the difference between actor and observer exaggerated by cultural differences, as well as the further bias caused by the sojourner’s position as a member of the out-group. Attributions problems tend to occur, as well, by differences in interactions between persons from high-context cultures (HCC) and low-context cultures (LCC).<sup>237</sup> Cultures differ on the extent to which they rely on explicit information from the context or on implicit shared (understood, presupposed) knowledge of the culture. Low-context cultures do not presume common knowledge to be shared by interactors or found in the context. Messages therefore have to be high in informational content. Low context-culture (LCC) members seek out large amounts of personal (not social) information from each other and consequently tend to be verbose. High-context cultures (HCC), on the other hand, expect that information to guide interaction is part of the context or is internalized in the person’s cultural understanding. Sociographic information is important in HCC cultures for knowing how to relate to others. Less verbosity is also more highly valued.<sup>238</sup>

On the basis of these differences between high-context cultures and low-context cultures Ehrenhaus states two hypotheses:

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p. 80. See also L. Ross, “The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process,” in Advances in Experimental Social Psychology, Vol. 10, L. Berkowitz (ed.) (New York: Academic Press, 1977), pp. 174-221.

<sup>234</sup>D. M. Taylor and V. Jaggi, “Ethnocentrism and Causal Attribution in a South India Context,” Journal of Cross-Cultural Psychology, 5 (1974): 162-171.

<sup>235</sup>Sillars, p. 90

<sup>236</sup>Peter Ehrenhaus, “Culture and the Attribution Process,” in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), p. 266.

<sup>237</sup>Far Eastern cultures, such as the Japanese, Chinese, Koreans, etc. tend to be high-context cultures (HCC) while Western cultures, such as Canada, the United States, and most of Europe tend to be low-context cultures (LCC).

<sup>238</sup>See chapters 6 and 7 in Edward T. Hall, Beyond Culture, (Garden City, NY: Anchor, 1977).



Hypothesis 1: High context culture (HCC) members are attributionally sensitive and predisposed toward situational features and situationally based explanations. Low-context cultures (LCC) members are attributionally sensitive and predisposed toward dispositional characteristics and dispositionally based explanations.

Hypothesis 2: In initial intercultural interactions, HCC and LCC communicators will seek out information deemed salient by each. This search, based upon the presuppositions of their respective cultures, will be the source of misattributions about each other.<sup>239</sup>

HCC members and LCC members are predisposed to look at differing types of information based on cultural schemata. Interaction between the two types of cultures are likely then to result in problematic misattribution and miscommunication.

Finally, problems with attribution can arise from personal and environmental instability, such as when an individual moves into a new cultural context. Kelley notes,

Person A will be more susceptible to influence the more variable his prior attributions have been. Attribution instability (and, hence, susceptibility to influence) will be high for a person who has (a) little social support, (b) prior information that is poor or ambiguous, (c) problems difficult beyond his capabilities, (d) views that have been disconfirmed because of their inappropriateness or nonveridicality and (e) other experiences engendering low self-confidence.<sup>240</sup>

Brislin notes on these points that 1) sojourners are likely to find little social support in the new culture, having left family and friends behind, 2) will have obtained little accurate prior information about social interaction before going (either because of the conviction that people are likely to be basically like the sojourner or with a pre-determined intention not to interact with host nationals any more than necessary), 3) will encounter problems in the new context that they will not be able to solve by themselves, especially achieving goals that in their home culture would be easy to reach, 4) their preconceived views are inadequate and inappropriate and therefore have to be discarded, and 5) the situation and difficulties will often result in low self-confidence. The result of this is that sojourners are likely to find difficulties in knowing how to make appropriate attributions or will make attributions which result in further difficulty.<sup>241</sup>

### **Self-Monitoring and Self-Efficacy**

Not only do people make attributions, they try to control the attributions that others make of them in order to most effectively manage interpersonal interaction. The capacity to do this is termed "self-monitoring."<sup>242</sup> Mark Snyder states, "The self-monitoring individual

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<sup>239</sup>Ehrenhaus, *idem.*, p. 263, 264.

<sup>240</sup>Kelley, *idem.*, p. 200.

<sup>241</sup>Brislin, *idem.*, pp. 100-101.

<sup>242</sup>Hull and Levy use the term "self-awareness" very much as Mark Snyder does "high self-monitor" to refer to the process of encoding information in terms of the self-relevance of salient aspects of the environment. Jay G. Hull and Alan S. Levy, "The Organizational Functions of the Self:

is one, who, out of concern for social appropriateness, is particularly sensitive to the expression and self-presentation of others in social situations and uses these cues as guidelines for monitoring his own self-presentation.”<sup>243</sup> According to Snyder, self-monitoring includes such items as,

“(a) a concern for the social appropriateness of one’s self-presentation (e.g. ‘At parties and social gatherings, I do not attempt to do or say things that others will like’); (b) attention to social comparison information as cues to appropriate self-expression (e.g., ‘When I am uncertain how to act in social situations, I look to the behaviour of others for cues’); (c) the ability to control and modify one’s self-presentation and expressive behaviour (e.g., ‘I can look anyone in the eye and tell a lie with a straight face [if for the right end]’); (d) the use of this ability in particular situations (e.g., ‘I may deceive people by being friendly when I really dislike them’); and (e) the extent to which the respondent’s expressive behaviour and self-presentation is cross-situationally consistent or variable (e.g., ‘In different situations and with different people, I often act like very different persons’).”<sup>244</sup>

Low self-monitoring individuals tend to focus on their self-characteristics and therefore also tend to prefer situations that allow them to exhibit their own underlying personal dispositions. High self-monitoring individuals, however, develop information from other individuals who act as “prototypic examples of persons from a wide range of behavioral domains” or models.<sup>245</sup> These individuals tend to prefer situations that present them with clearly defined cues as to how to behave. They learn easily from other people. The capacities to be attentive, other-oriented, perceptive of the “signals” sent by others,<sup>246</sup> adaptable to differing communication situations, and contextually sensitive make high self-monitors generally more socially and communicationally competent than low self-monitors. The ability to learn from “mentors” or models in the cross-cultural context is especially significant. Because “low self-monitoring individuals preferred homogeneous and undifferentiated social environments in which they could spend time with friends who were globally similar to themselves (thus making it easier to behave in a manner characteristic to one’s attitudes and so forth)”<sup>247</sup> either they do not choose to move into the ambiguities of the cross-cultural context or they face a greater need for social support, and may have a tendency to gravitate to the sojourner’s enclave.

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An Alternative to the Duval and Wicklund Model of Self-Awareness,” Journal of Personality and Social Psychology 37 (1979): 756-768.

<sup>243</sup>Mark Snyder, "Self-Monitoring of Expressive Behavior," Journal of Personality and Social Psychology 30 (1974): 528.

<sup>244</sup>These were part of a 25-item self-report scale that Snyder produced to measure self-monitoring. Ibid., p. 529.

<sup>245</sup>Michael J. Cody and Margaret L. McLaughlin, "The Situation as a Construct in Interpersonal Communication Research," pp. 268-269.

<sup>246</sup>Beverly Davenport Sypher, "The Importance of Social Cognitive Abilities in Organizations," p. 119.

<sup>247</sup>Cody and McLaughlin, *idem.*, p. 269.



While observing and imitating models are important to cross-cultural adaptation and acculturation, the motivation to do so must include the perception of one's capacity to do so.

"...people acquire new behaviour patterns by observing behaviors in others, using these 'models' as guides, and self-correcting their own behaviour once enacted on the basis of social feedback and outcome achievement. The degree to which an individual believes he or she *can* enact a behavioral routine successfully, in turn, determines his or her likelihood of initiating and persisting in these behaviors (assuming that the objective of these behaviors is positively balanced)."<sup>248</sup>

Such outcome expectancy has been termed "self-efficacy" and has been defined as "the conviction that one is able to successfully complete the behaviour required to produce outcomes."<sup>249</sup> The strength of this conviction in one's efforts in initiating and completing a task determines first, willingness to even enter the behavioural setting; second, the amount of effort that will be expended; and third, the amount of persistence in the face of difficulties. Previous experiences of mastery in like situations, successful modelling of performance tasks by multiple individuals and in varying circumstances, positive verbal persuasion, and encouraging emotional arousal (rather than debilitating emotional arousal) help to develop self-efficacy in individuals.<sup>250</sup> Support structures within the cross-cultural context that provide the models, positive encouragement, and productive emotional arousal are of importance to sojourners who are struggling with culture shock and the ambiguities of a differing social system.<sup>251</sup> Fear and low self-efficacy may be in part responsible for premature attrition.

### **Cognitive Complexity**

Cognitive complexity refers to the capacity to interpret social behaviour in multiple dimensions or ways. Kelly defined personal constructs as bipolar cognitive structures which are used to interpret, evaluate, and anticipate events. He thought of a construct as a pathway of movement wherein new data could follow regulated channels or construct new pathways thereby developing new dimensions.<sup>252</sup> Werner posits that this development takes place according to the "orthogenetic principle" that "wherever development occurs, it proceeds from a state of relative globality and lack of differentiation to states of increasing

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<sup>248</sup>Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, p. 40.

<sup>249</sup>Albert Bandura, "Self-efficacy: Toward a Unifying Theory of Behavioral Change," Psychological Review 84 (1977): 193-194.

<sup>250</sup>Bandura, *ibid.*, pp. 194-200.

<sup>251</sup>For importance of social support see Mara B. Adelman, "Cross-Cultural Adjustment," International Journal of Intercultural Relations 12 (1988): 183-204 and Gary Fontaine, "Roles of Social Support Systems in Overseas Relocation: Implications for Intercultural Training," International Journal of Intercultural Relations 10 (1986): 361-378.

<sup>252</sup>George A. Kelly, The Psychology of Personal Constructs, Vol. 1. (New York: W.W. Norton and Co., 1955), pp. 126-128.

differentiation, articulation, and hierarchic integration.”<sup>253</sup> This principle suggests that as individuals develop from childhood, their construct systems become more differentiated (that is, more capable of evaluating multiple situations and people from differing perspectives), more articulated (that is, able to absorb more abstract and even contradictory elements), and more integrated (or organized as the individual is able to relate constructs to one another). Furthermore, development of constructs might occur in one domain (for example, knowledge of computers) but not in another (for example, interpersonal skills).<sup>254</sup>

Individuals who are cognitively complex appear to be able to look for alternative qualities or situational reasons for seeming inconsistencies. Cognitively complex individuals also appear to be more flexible. Furthermore, cognitively complex individuals, because able to differentiate more widely and having a larger number of constructs to work with, are able to discriminate impressions at a higher level.<sup>255</sup> Researchers have found evidence linking communication competence and cognitive complexity,<sup>256</sup> social perspective-taking and cognitive complexity,<sup>257</sup> and interpersonal relationships of the culturally different to cognitive complexity.<sup>258</sup> It would appear that the higher the level of cognitive complexity the more competently an individual will be at moving effectively into, adapting to, and learning from a new culture.

### **Communication and Social Learning**

Brent Ruben states, “...there is a reciprocally causal and mutually defining relationship between human communication and culture; culture is the product of communication, and human communication processes and outcomes are the result of culture.”<sup>259</sup> Culture, cultural history, thought processes, language, behaviour, and processes of communication are inextricably linked and must be included in any understanding of

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<sup>253</sup>Heinz Werner, "The Concept of Development from a Comparative and Organismic View," in The Concept of Development, Dale B. Harris (ed.) (Minneapolis, MN: University of Minnesota Press, 1957), p. 126.

<sup>254</sup>Brant R. Burleson, "Cognitive Complexity," in Personality and Interpersonal Communication, James C. McCroskey and John A. Daly (ed.) Sage Series in Interpersonal Communication, 6 (Beverly Hills, CA: Sage Publishers, 1987), p. 307.

<sup>255</sup>Monica Laurie Norton, "The Effects of Communication Effectiveness and Cognitive Complexity on Culture Shock" (M.A. thesis, Abilene Christian University, 1984), pp. 20-21.

<sup>256</sup>Claudia L. Hale, "Cognitive Complexity-Simplicity as a Determinant of Communication Effectiveness," Communication Monographs 47 (1980): 310.

<sup>257</sup>Claudia L. Hale and Jesse G. Delia, "Cognitive Complexity and Social Perspective-Taking," Communication Monographs 43 (1976): 195-203.

<sup>258</sup>Harry C. Triandis and Vasso Vassiliou, "A Comparative Analysis of Subjective Culture," in The Analysis of Subjective Culture, Harry C. Triandis (ed.) (New York: John Wiley and Sons, Ltd., 1972), pp. 299-335.

<sup>259</sup>Brent D. Ruben, "A System-Theoretic View," in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), p. 141.



communication competence.<sup>260</sup> As Glenn has pointed out, each man's thought is to a large extent a function of this man's past since his cultural heritage (that is, his forefather's thoughts, ideas, systems, and institutions) has had a large part in forming his cultural character.<sup>261</sup> Our culture "conditions and structures our perceptual processes in such a way that we develop culturally determined perceptual sets. These sets not only influence which stimuli reach our awareness, but more importantly they have a great influence of the judgemental aspect of perception--the attachment of meaning to these stimuli."<sup>262</sup> Porter explains why this is so from the meaning of culture.

When I use the word "culture" I am referring to the cumulative deposit of knowledge, experience, meanings, beliefs, values, attitudes, religions, concepts of self, the universe, and self-universe relationships, hierarchies of status, role expectations, spatial relations, and time concepts acquired by a large group of people in the course of generations through individual and group striving. Culture manifests itself both in patterns of language and thought and in forms of activity and behavior. These patterns become models for common adaptive acts and styles of expressive behavior which enable people to live in a society within a given geographical environment at a given state of technological development.<sup>263</sup>

Culture, then, is a system of meanings.<sup>264</sup> Birdwhistell states it: "culture and communication are terms which represent two different viewpoints or methods of representation of patterned and structured human interconnectedness. As 'culture' the focus is upon structure; as 'communication,' it is upon process."<sup>265</sup> As a system of meanings, culture could also be viewed as a code, that is, a set of rules and knowledge<sup>266</sup> that enable

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<sup>260</sup>"We cannot separate culture from communication, for as soon as we start to talk about one we are almost inevitably talking about the other, too." John C. Condon and Fathi S. Yousef, An Introduction to Intercultural Communication, (Indianapolis, IN: The Bobbs-Merrill Company, Inc., 1975), p. 35.

<sup>261</sup>Edmund S. Glenn, "Meaning and Behavior: Communication and Culture," in Intercultural Communication: A Reader, Larry A. Samovar and Richard E. Porter (eds.) (Belmont, CA: Wadsworth Publishing Company, Inc., 1973), pp. 123-141.

<sup>262</sup>Richard E. Porter, "An Overview of Intercultural Communication," in Intercultural Communication: A Reader, Larry A. Samovar and Richard E. Porter (eds.) (Belmont, CA: Wadsworth Publishing Company, Inc., 1972), p. 5.

<sup>263</sup>Porter, *ibid.*, p. 3.

<sup>264</sup>Jack Bilmes and Stephen T. Boggs, "Language and Communication: The Foundations of Culture," in Perspectives on Cross-Cultural Psychology, Anthony J. Marsella, Roland G. Tharp and Thomas Ciorowski (eds.) (New York: Academic Press, 1979), p. 48.

<sup>265</sup>Ray L. Birdwhistell, Kinesics and Context: Essays on Body Motion Communication, (New York: Ballentine Press, 1970), p. 318.

<sup>266</sup>Cooley describes a code as "a culturally defined, rule-governed system of shared arbitrary symbols that is used to transmit meaning. This is a very broad definition, including within its scope both oral and written language, those paralanguage phenomena (such as pitch, stress, and loudness) systematically related to oral language; certain nonverbal phenomena characterized by their systematicity (gesture, facial expression, and parts of gaze and posture), and finally, the composition of discourse: silence, interruptions turn-taking, the organization of talk, choice of dialect or language, bilingual/bidialectal behaviors, and the like. ...Codes exhibit certain properties. The relation between meaning and symbol or unit of behavior is arbitrary. Their structure, tokens, and use are

culturally appropriate behaviour to be both generated and interpreted.<sup>267</sup> The problem for intercultural communication, of course, is that culture as a code for interpretation too easily develops ethnocentrism since the code for interpretation in one culture is likely different from the code that generates behaviour in the other. Yet the very fact that we can interpret social behaviour is because there are codes (rules) for social behaviour which are widely shared in the group to which they belong, even as the ability to communicate occurs because of the codes that govern communication.

When we speak of culture as communication we are speaking of context which, broadly defined, refers to "the interrelated conditions in which something exists or occurs."<sup>268</sup> Carol Prutting lists contextual dimensions which have been identified as important for competence in communication as 1) the *cognitive and social context* (that is, knowledge of the socio-cultural environment, the setting, rules for behaviour and interaction, and necessary facts pertaining to the communication partner(s), 2) the *physical context* (perceptual properties of people, places, and objects), 3) the *linguistic context* (prior, co-occurring, and post verbal behaviour used in composing and interpreting communication), and 4) the *nonlinguistic context* (nonverbal and paralinguistic behaviour both generating and interpreting behaviour).<sup>269</sup>

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rigidly controlled by the using society, although this control does not keep change from occurring. They commonly possess a complex, hierarchically arranged internal structure. This hierarchical structure is most apparent in verbal and written codes, but has been shown to hold in paralinguage behaviors and in gesture and posture. Finally, the various types of phenomena (verbal, nonverbal, paralinguage, and discourse) exhibit interrelationships that indicate the presence of a parallel structure [to each other].

"Code is the vehicle for the transmission of meaning and is therefore placed at the center of communication research. Because it is so tightly related to culture, the code is the arena where the individual and cultural values, priorities, and understandings (or lack of them) are displayed in the communication event. ...These social meanings are expressed in the code at all levels, both vertical and horizontal: the choice of style, dialect, or language in those cases where a group's repertoire is large enough to allow such a choice; politeness phenomena; the understanding of how assertions are to be interpreted; how one's talk is organized; the choice of talk or silence, eye contact, posture and gesture. ...Codes then, can be seen to exhibit complex internal relationships and equally complex relationships to the the using member's culture." Ralph E. Cooley, "Codes and Contexts," in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), pp. 242-245.

<sup>267</sup>Bilmes and Boggs, *idem.*, pp. 56-57. "Cultural knowledge is organized; we discover meaning by grasping the underlying pattern, the implicit frame of reference that people have learned. Kroeber and Parsons emphasized this structural aspect of culture when they identified culture as 'the patterns of values, ideas, and other symbolic-meaningful systems.' Much like the system of rules that defines a game of football or hockey, agreed on cultural definitions enable people to coordinate their behavior and make sense out of their shared experiences." James P. Spradley and David W. McCurdy, The Cultural Experience: Ethnography in Complex Society, (Chicago, IL: Science Research Associates, Inc., 1972), pp. 59-60.

<sup>268</sup>Carol A. Prutting, "Pragmatics as Social Competence," Journal of Speech and Hearing Disorders 47 (1982): 125.

<sup>269</sup>*Ibid.*, p. 125.



Some of the breadth of these contextual factors is depicted in Tyler's Contextual, Componential, and Prismatic Communication Model (see Figure 5 next page).<sup>270</sup> In intercultural communication there are at minimum two sets (two individuals, two cultures) of individual outlooks and purposes, prior experiences, present health, education, training, talents, attitudes, predispositions, expectations, roles, status, individual/cultural assumptions, values, and norms (A and B). There is a time setting comprising past (historical) interactions, the current cognitive and affective situation, and anticipation of outcomes (on a continuum from positive to negative). Context also includes environment and setting (V) including sports and social events, classes, dining situations, etc. There are the subtle (or not so subtle) effects of direct or indirect observers and participants (if any, or at what distance) (R,S,T,U). Cultural thinking, affective, and behavioural patterns have differing impact depending on their similarity (J and K).<sup>271</sup> Organizational, social, political, business, and religious affiliation add other dimensions (G and H).

Verbal and paraverbal components affecting the process include skills at morphology (arrangements of meaning units in word forms), syntax (the arrangements of those words to show meaning relations and functions), word meanings, and phonology (the formation of word sounds). Closely tied to phonology are the paraverbals--pitch, tone, rate, stress, rhythm, use of silence, and other stylistics, including whether the voice is male or female.<sup>272</sup> Non-verbal codes include *kinesics* (visual bodily movements--gestures, facial expressions [such as wrinkling forehead, frowning, and lifting eyebrow], shape of mouth [firm, open, puckered], trunk and limb movements, posture [relaxed, formal, angle, etc.], and eyes [gaze patterns, winking, blinking, movement, etc.], and emotional expression, such happiness, endearment, respect, sorrow, fear, anger, disgust, impatience, embarrassment, etc.), *haptics* (touch, pressure, force), *proxemics* (use of personal distance and spacing relationships), *chronemics* (use of time as a message system--waiting time, lead time, and time spent with another), *physical appearance* (clothing, makeup, hairstyle, adornments, cleanliness), and *artifacts* (the use of signs, symbols, objects, colours, and other environmental features that can carry a message) (O and Q in model).

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<sup>270</sup>V. Lynn Tyler, "A Contextual, Componential, and Prismatic Model of Intercultural Communication Process/Experience(s)," (Provo, Utah: Language Research Center, Brigham Young University, August 1976), p. 1.

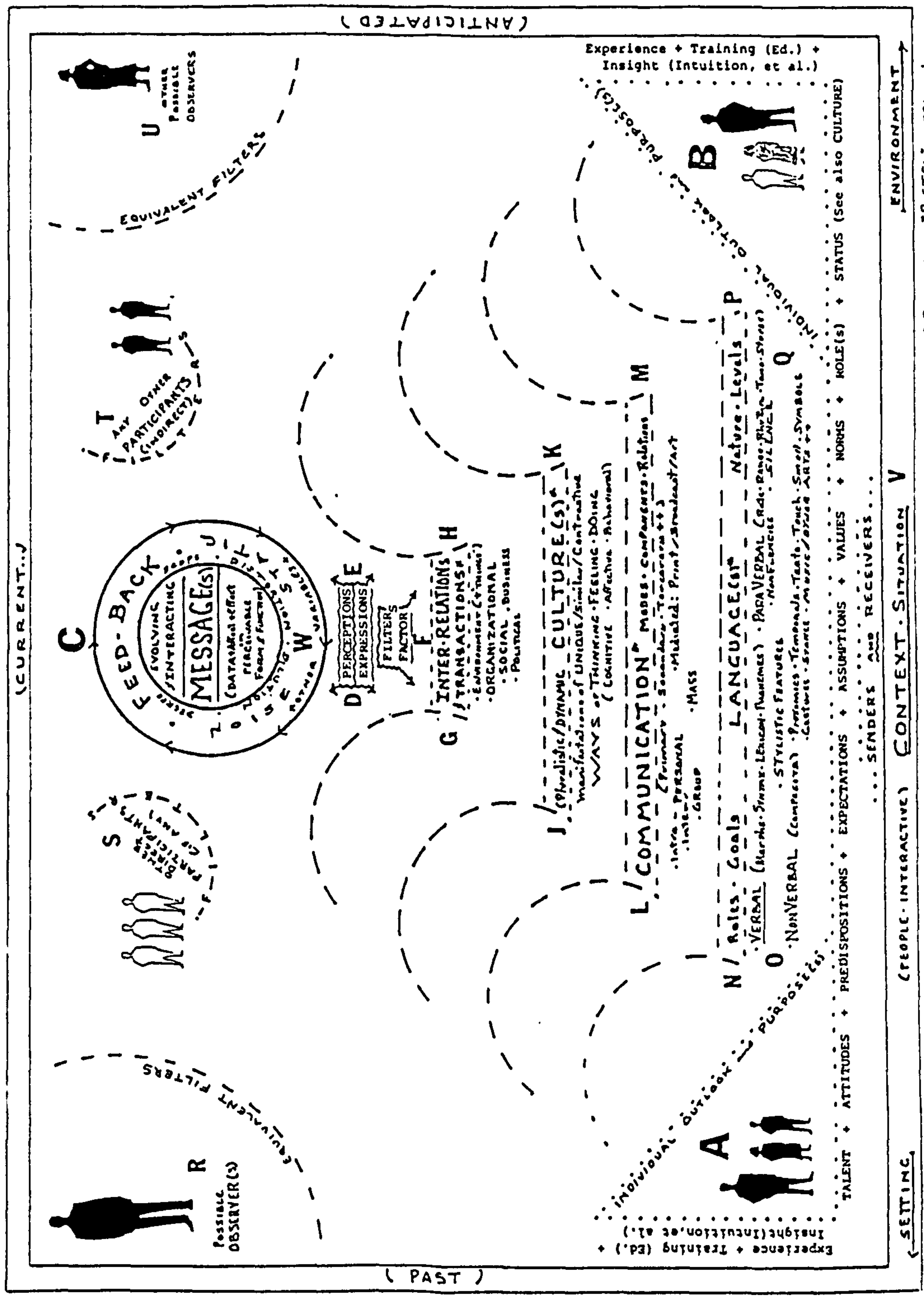
<sup>271</sup>There is evidence that the less similar they are, the more difficult intercultural communication is. "Poles, for example, communicate most efficiently with other Poles, less easily with Italians, even less easily with Jews, and least easily with Puerto Ricans and blacks." John J. Gumperz, "Language, Communication, and Public Negotiation," in Anthropology and the Public Interest, Peggy Sanday (ed.) (New York: Academic Press, 1976), p. 276.

<sup>272</sup>Fighter pilots were found to respond more instinctively to a woman's voice than a man's, so fighter aircraft with Head-Up Displays (HUDs) have a female voice warning of danger (system or pilot failure, warning to "pull-up," etc.)

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A Contextual, Componential, and Prismatic Model of INTERCULTURAL COMMUNICATION PROCESS/EXPERIENCE(s)



The Greatest Challenge to SUCCESSFUL INTERCULTURAL COMMUNICATION is ITS ILLUSION!  
... SENDERS AND RECEIVERS ...  
For detail, see: "Pastel" model, and "Unique Encounter" 5/1



The use of non-verbal cues for understanding is a major component of communication. Judee Burgoon cites Philpott's analysis of 23 studies which revealed that approximately 31 percent of the variance in meaning could be attributed to the verbal channel, the rest (approximately 69 percent) to be accounted for by nonverbal cues.<sup>273</sup>

Burgoon summarized a series of research findings with the following propositions:

1. *As a general pattern, adults place more reliance on nonverbal cues in determining social meaning.* This pattern is the most common but must be restricted by the propositions that follow.
2. *Children rely more heavily on verbal than nonverbal cues.* As children acquire language, they become highly literal. For example, they do not interpret sarcasm well. Prior to puberty, however, they shift to greater belief in the nonverbal signals.
3. *Adult reliance on nonverbal cues is greatest when the verbal and nonverbal messages conflict; verbal cues become increasingly important as the message become more congruent.* Some research finds that under congruent message conditions, verbal messages are believed over nonverbal ones. But more commonly, congruency among channels just makes the verbal and nonverbal coding systems more equal in their contribution to meaning.
4. *The function of communication mediates channel reliance:* Verbal cues are more important for factual, abstract, and persuasive communications, whereas nonverbal cues are more important for relational, attributional, affective, and attitudinal messages. Not surprisingly, people rely on verbalizations for the denotative or 'objective' meaning of a message. But for connotations, meta-messages, and meanings about the interpersonal relationship between speaker and auditor, they largely depend on nonverbal signals.
5. *Individuals have consistent biases in channel reliance:* Some consistently depend on verbal information; some consistently depend on nonverbal information; and some are situationally adaptable. Although individuals have their personal predilections for which channels of information they attend to most often, the prevailing pattern is still one of relying more frequently and for more purposes on the nonverbal codes.<sup>274</sup>

In the cross-cultural context, then, nonverbal cues are relied on to supply the majority of communication comprehension. The problem is that, while certain kinesic expressions (such as emotion) are physiologically the same everywhere, the way they may be expressed in public may differ from the way they are permitted to be expressed in private, or they may actually be proscribed by the culture as improper. Gestures from one culture may be meaningless or on the other hand insulting in another culture. Eye gaze allowances differ from culture to culture. Grooming and adornment indicate status, role, and power more so in some cultures than in others. The role of time and space has been studied and found to differ considerably from culture to culture.<sup>275</sup>

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<sup>273</sup>J. S. Philpott, "The Relative Contribution to Meaning of Verbal and Nonverbal Channels of Communication: A Meta-Analysis. An unpublished master's thesis, University of Nebraska, 1983. Cited in Judee K. Burgoon, "Nonverbal Signals," in Handbook of Interpersonal Communication, Mark L. Knapp and Gerald R. Miller (ed.) (Beverly Hills, CA: Sage Publications, 1985), p. 346.

<sup>274</sup>Burgoon, *ibid.*, p. 347. Author's emphasis.

<sup>275</sup>The works of Edward Hall are perhaps the most famous for the study of chronemics and proxemics. E.T. Hall, The Hidden Dimension: Man's Use of Space in Public and Private, (London: Bodley Head, 1966) and E.T. Hall, The Silent Language, (New York: Fawcett, 1959).

Wiemann's survey of the literature on communication competence resulted in identification of discreet molecular behaviours that are readily observable in face-to-face encounters in a five dimensional model: 1) affiliation/support, 2) social relaxation, 3) empathy, 4) behavioural flexibility, and 5) interaction management skills. Examples of behaviours identified with *affiliation/support* include: a) eye behaviour, b) speech choices indicating status or affiliative relationships (such as Dr., Your Honour, Sir, pet names), c) head nods, d) duration of speaking time; number of statements per minute, e) pleasantness of expression (smiling, frowning, etc.), and f) physical proximity. *Social relaxation* examples include a) general postural relaxation cues (rocking movements, leg and foot movements, body lean), b) rate of speech, c) speech disturbances, hesitations, noninfluences, and d) object manipulations (twirling pen, hair, etc.). *Empathy* is identified with such molecular behaviours as a) reciprocity of affect displays (smiling, nodding, yawning, and other immediacy displays), b) verbal responses indicating understanding of other's situation (e.g. "I know how you feel."), and c) perceived active listening by head nods and verbal listener responses or reinforcers. *Behavioural flexibility* included such actions as a) verbal immediacy cues and b) the speech and terminology choices identifying status and affiliation of interactants.

Wiemann also listed Argyle's two general interaction management skills: "the ability to establish and sustain a smooth and easy pattern of interaction" and the ability to maintain control of the interaction without dominating.<sup>276</sup> *Interaction management* displays the following skills salient to many Western interaction contexts: a) interruptions of the speaker are not permitted, b) one person talks at a time, c) speaker turns must interchange, d) frequent and lengthy pauses should be avoided, e) an interactant must be perceived as devoting full attention to the encounter.<sup>277</sup> Although most of the empirical findings related to competent communication interactions listed above were researched within an North American Anglo-Saxon context and therefore are not necessarily transferable to another cultural context, they provide further empirical evidence for the importance of the broader context around language for competent interaction.

### Select Areas of Cross-Cultural Ministry Competence

Mitchell Hammer's review of cross-cultural research in the intercultural field suggests five "core" skills and five secondary skills needed for competent communication. The core skills include: 1) *interaction management skills* which have to do with initiating and

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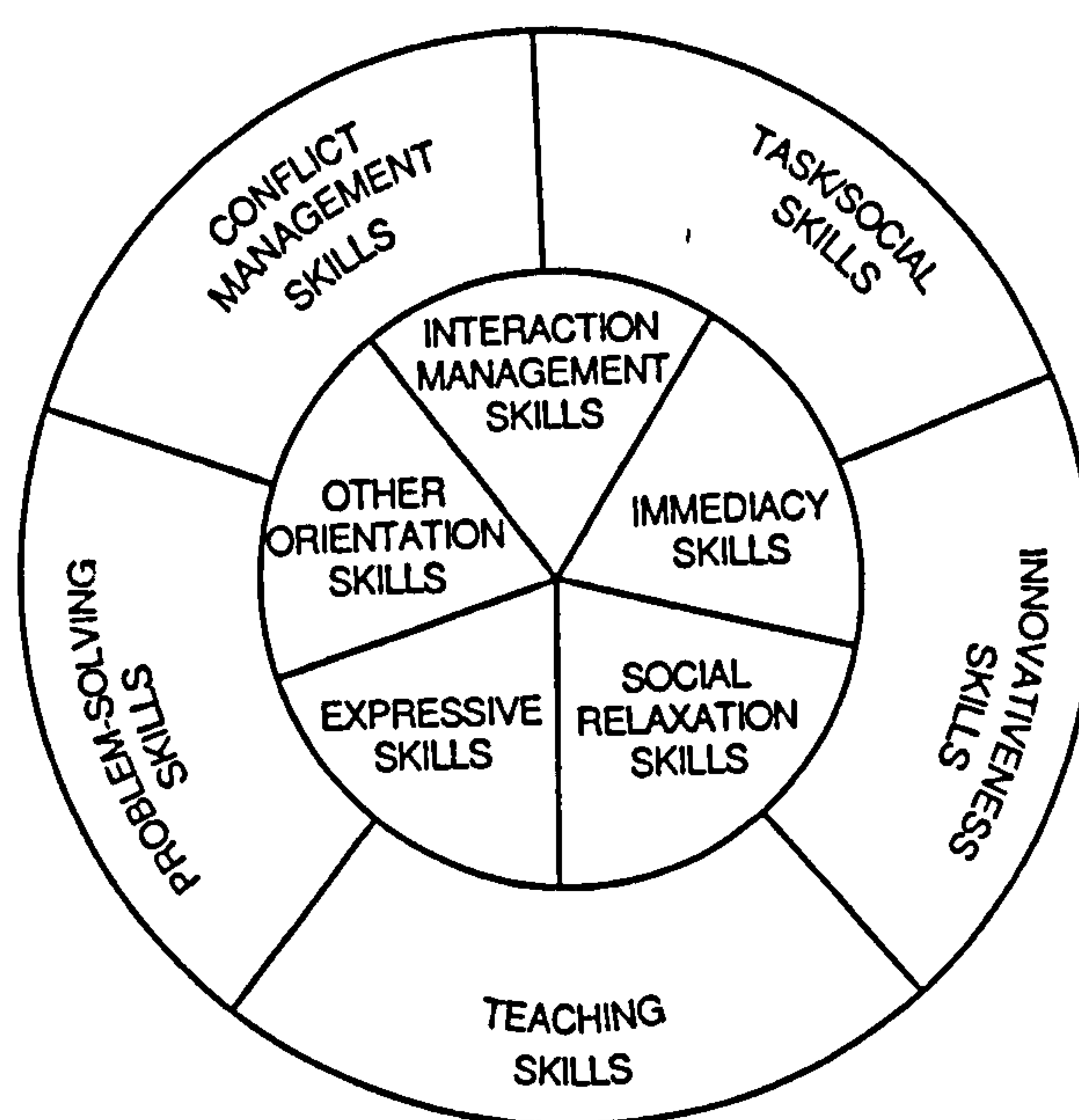
<sup>276</sup>Michael Argyle, Adrian Furnham and Jean Ann Graham, *Social Situations*, (Cambridge: Cambridge University Press, 1969, reprinted 1981), pp. 327-328.

<sup>277</sup>John M. Wiemann, "Explication and Test of a Model of Communicative Competence," in *Interpersonal Communication: A Relational Perspective*, Ben W. Morse and Lynn A. Phelps (ed.) (Minneapolis, MN: Burgess Publishing Company, 1980), pp. 102-103.



terminating a conversation as well as turn-taking, 2) *immediacy skills* which involve approach-avoidance orientations of the interactants, that is, their relationship development abilities, 3) *social relaxation skills* which relate to the ability to manage intercultural stress, anxiety, depression, frustration, loneliness, tolerance for ambiguity, and composure in the face of obstacles, 4) *expressive skills* showing the degrees and kinds of verbal and non-verbal interaction, including host-language skills, and 5) *other-orientation skills* indicating adaptability to the other person, empathy, open-mindedness, and accurate perception of the other's verbal and non-verbal communication. The secondary skills may not be central to any single communication event but enter into the broader domain of skills required within the cross-cultural context for most people. These include: 1) task and social skills, 2) innovativeness skills, 3) teaching skills, 4) problem-solving skills, and 5) conflict management skills.<sup>278</sup>

**Figure 6: Intercultural Communication Skills (Hammer)**



All of these dimensions are important for the missionary within the cross-cultural context. In terms of the missionary task, this next section will discuss the range of personal characteristics and ministry skills that relate to cross-cultural ministry competence.

<sup>278</sup>Mitchell R. Hammer, "Intercultural Communication Competence," in The Handbook of International and Intercultural Communication, M. K. Asante and William B. Gudykunst (ed.) (Newbury Park, CA: Sage, 1989) pp. 247-260. See also article in Mitchell R. Hammer, "Intercultural Communication Skills," Sieter Communiqué 21 (Dec.1991-Jan.1992): 6, 15. Figure 6 from diagram on page 6.

## **Ministry Competence**

Ministry competence as a rubric could cover the entire gamut of field activities of a missionary: cultural knowledge and fit, communication (language, listening, conversational, use of non-verbal communication, etc. skills), interpersonal interaction, social skills, societal knowledge and fit, organizational interaction (mission and national church(es)/organizations), biblical and theological knowledge, personal character and spiritual disciplines, general ministry skills (evangelism, ability to teach biblical truth informally), and professional skills (teaching, administration, technical skills, church-planting, etc.). The numbers of tasks and roles which career missionaries are called upon to perform in church-planting cross-culturally are complex. Phil Elkins argues that "pioneer church planting is at least as complicated as learning to be a surgeon"<sup>279</sup> and may well take as much time to learn. Dayton and Fraser suggest that before a person can be considered a competent cross-cultural missionary as many as six terms (of four years each with studies between each term) should be considered in an on-going continuing education program.<sup>280</sup>

## **Personal Qualities: Spiritual, Emotional, Relational, Professional**

On the basis of his observation of missionary candidates from Bible College and Seminaries in the United States over fourteen years, Ron Iwasko stated that he believes them to be weak in prayer, highly competitive, obsessed with measured results, impatient, lacking a learning posture, and lacking commitment to the local church. He went on to state that lack of maturity in these candidates stemmed from American values which 1) find individual worth dependant on measurable achievement, 2) believe that knowing and doing are more important than being, 3) believe that education brings success, and 4) hold that the individual is supreme. In his view, the most critical elements for effective mission effort are team work, sacrifice, servanthood, relationships, creativity, and above all, true spirituality.<sup>281</sup> Somewhat along the same lines, Ferris' research discovered that, while the four evangelical seminaries he studied claimed to be attempting to integrate faith, empathy, integrity, virtue, leadership

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<sup>279</sup>Phil Elkins, "Preparation: Pay The Price," in Helping Missionaries Grow: Readings in Mental Health and Missions, Kelly S. O'Donnell and Michèle Lewis O'Donnell (ed.) (Pasadena, CA: William Carey Library, 1988), p. 113.

<sup>280</sup>Edward R. Dayton and David A. Fraser, Planning Strategies for World Evangelization, (Grand Rapids, MI: William B. Eerdmans Publishing Company, 1980), pp. 243-251. The authors cite J. Herbert Kane, a missionary educator, "There's still a prevailing notion that one can major in any subject in college or seminary and be a good missionary. No special courses are necessary! Most leading missions have a minimum requirement--one year of Bible--nothing is said of missions! I think this is a great mistake. To go overseas without missionary anthropology, cross-cultural communication, are studies, missionary life at work--to say nothing of the history of missions and non-Christian religions, is an act of consummate folly!"

<sup>281</sup>Ron A. Iwasko, "A Personnel Director Speaks to Professors of Mission," Conference: Evangelical Missions Society, (New Orleans: 1990).



skills, altruism, zeal, involvement, wisdom, and self-acceptance as dimensions of servant-leadership into the lives of their students, they were not very successful at it.<sup>282</sup>

From Dec. 2-4, 1982, approximately 130 Candidate Secretaries, Personnel Directors, and mission leaders from IFMA and EFMA member missions met to discuss the issue of "Preparing the Missionary for Field Service." In small groups they hammered out, among other things, necessary personal qualities needed by missionaries. These included:

adaptability, emotional stability, ability to communicate, openness and sociability, sensitivity to people, patience and perseverance, initiative, humour, personal integrity, depth of spiritual life with constant and substantive devotional life, teammanship, submission to authority, ability to structure time and work, harmonious family relationships, continuing orientation to learning, humility, proper self image, cultural sensitivity, willingness to live without comfort and amenities (i.e. self-disciplined and sacrificial), accessibility, wisdom and discretion in personal relationships, wisdom in dealing with issues, involvement with people, zeal in ministry, expression of distinctive Christian attributes such as love, joy, faith, meekness, etc., empathy with the fears, hurts, struggles and joys of others, flexibility, tolerance for ambiguity, and ability to handle stress.<sup>283</sup>

Many of these characteristics are equivalent to the lists of traits discussed earlier as essential for effective cross-cultural adaptation. To these Doug Walker would add "creativity;"<sup>284</sup>

<sup>282</sup>Robert W. Ferris, "The Emphasis on Leadership as Servanthood: Analysis of Curriculum Commitments" (Ph.D., Michigan State University, 1982), p. 42. The following are the description statements of these qualities that he identified and based his study on:

Quality	Descriptor
The minister loves the Triune God. He diligently studies the Scriptures and responds to them in faith and obedience because He knows that God is revealed in them.	Faith
The minister loves people. He is sensitive to the joys, hurts, and struggles of others, and responds to them in gentle affirmation and compassionate service.	Empathy
The minister values and demonstrates integrity in his relationships both in private and professional life.	Integrity
The minister evidences growth in those virtues which are distinctively Christian, particularly love, joy, faith, humility, meekness, and self-control.	Virtue
The minister is a leader. He motivates and equips others for their ministry both in the church and in the community.	Leadership
The minister gives himself to the service of God and the church without concern for his own personal gain or advantage.	Altruism
The minister is zealous for the advancement of Christ's kingdom, the proclamation of the gospel, the conversion of sinners, and the defense of Christian truth.	Zeal
The minister seeks to be informed about problems of contemporary life and society, and interacts with others to develop a Christian perspective on these problems.	Involvement
The minister is wise, discerning, and discreet in personal relationships and in dealing with major and minor issues.	Wisdom
The minister is an emotionally healthy person, confident of his ability to minister through the grace of Christ, and open to Christians of other denominations and traditions.	Self-acceptance

<sup>283</sup>Personal notes from the workshop.

<sup>284</sup>Doug Walker, "Roadblocks to Missionary Creativity and How to Overcome Them," Evangelical Missions Quarterly 15 (1979): 143-149.

José Gallardo would add “spiritual power...through prayer, suffering, and the fruits and gifts of the Holy Spirit,” a disciplined lifestyle to be available to serve, identification with people,<sup>285</sup> radical personal discipleship that applies the gospel to one’s daily life, and commitment to evangelism as a way of life;<sup>286</sup> and Susan Heisey would add vulnerability and openness to those of the other culture, respect (for nationals, community leaders and government officials, teammanship/partnership with nationals, and humility (willingness to be humble and ask forgiveness for hurts).<sup>287</sup>

Wilfred Bellamy identified the following as essential personal characteristics for mission: unreserved commitment to God, a deep sense of responsibility, an abiding dependency on God based on recognition of resources available from Him, a holy life which models the message, a sense of being anchored in the will of God, a healthy sense of self-esteem and of other-esteem, secure family relationships, a servant heart, willingness to change, and identification with the people as well as the message.<sup>288</sup>

S. A. Witmer, who was the Executive Director of the American Association of Bible Colleges for many years, identified the following as goals for Bible College training of missionaries: 1) spiritual, emotional, social, and intellectual maturity, 2) complete dedication to Christ and to His service (that is, knowing practically the meaning of Christ’s lordship over the entire personal, social, and intellectual life), 3) self-understanding of abilities and limitations, 4) proper regard for the body as the temple of the Holy Spirit, 5) dependability, 6) willingness to work with diligence, 7) regular times for prayer and meditation of the Word, 8) being motivated by love for Christ and the glory of God, 9) good taste according to Scriptural standards in matters of appearance and conduct, 10) disposition of friendliness and good will, 11) loyalty, 12) respect for authority, 13) Christian tolerance consistent with sound convictions, 14) willingness to receive counsel and criticism, 15) ability to work congenially and cooperatively with others, 16) deep sympathetic understanding of people--their needs, suffering, tragedies, 17) disposition to react in a Christian way toward defects in Christian organizations and their leaders, 18) readiness to take helpful attitudes toward fellow workers in relation to their shortcomings, and 19) positive attitude toward peoples of other races and social ranks.<sup>289</sup>

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<sup>285</sup>“Weeping with those who weep, rejoicing with those who rejoice.”

<sup>286</sup>Jose Gallardo, "How My Understanding of Mission Has Developed," Mission Focus 16 (1988): 34 - 35.

<sup>287</sup>Nancy Heisey, "Attributes of a Christian Internationalist," Mission Focus 17 (1989): 77, 78 - 81.

<sup>288</sup>Wilfred Bellamy, "Personnel for Tomorrow's Mission," in Evangelical Missions Tomorrow, Wade T. Coggins and Edward L. Frizen (ed.) (South Pasadena, CA: William Carey Library, 1977), pp. 107-112.

<sup>289</sup>S. A. Witmer, Report on Preparation of Missionaries in Bible Institutes and Bible Colleges, (Fort Wayne, Indiana: Accrediting Association of Bible Colleges, 1959,1960), p. 10,11.



Valuable as they might be, one can make nearly endless lists of personal qualities deemed essential.<sup>290</sup> Missionary candidates do not come as perfect, mature individuals. The goal is growth toward biblical maturity in spirituality, outlook, action, and character.<sup>291</sup> John Powell perhaps summarizes it best as a series of bi-polar couplets which need to be kept in balance or aligned to what is situationally and positively needed: 1) person-orientation vs program-orientation, 2) potentiality vs actuality (that is, “I am what I am” vs. “I can change”), 3) relational vs. ideational, 4) problem-orientation vs. development-orientation, 5) avoidance vs. advance, 6) obedience to God’s call vs. ego-trip, 7) commitment vs. convenience, 8) personal power vs spiritual power (that is, using personal charisma and ‘gimmicks’ in contrast to the genuine working of God), 9) materialism vs. spiritual perspectives, 10) experience vs. knowledge, 11) solitude vs. community, and 12) doing vs. being.<sup>292</sup>

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<sup>290</sup>Nearly every mission has listings of personal qualities that are required for candidacy and include discussions during pre-field training on how to maintain these characteristics in field ministry. Wycliffe (Summer Institute of Linguistics), for example, have the following in the list of objectives for their pre-field training program: (From Wycliffe/Summer Institute of Linguistics, Goals of Pre-Field Training, unpublished mimeographed documents, July 1983, items taken from pp. 1-2.

“[In order] that each member be able to maintain and develop his/her own spiritual life and vitality, minister and share in fellowship with others, witness to others, all in a cross-cultural situation and in the face of new areas of experience in the practice of faith, [it is important...]

1. That each member have a sound Biblical understanding of self-acceptance and self-forgiveness.
2. That each member have a genuine servant-attitude without self-denigration.
3. That each member be able to balance commitment to service with commitment to maintaining the quality of spiritual life.
4. That each member be able to maintain the quality of spiritual life, even in ‘isolated situations’ without losing commitment to fellowship with other believers; and be able to understand how service experience affects the balance of these in himself/herself and in others.
5. That each member be aware that service in WBT and SIL will bring with it new areas of experience in the practice of faith, and seek to identify some of these, and prepare for them.
6. That each member be able to fellowship with, minister to, and witness to people of other cultures, as well as his/her own.
7. That each member be able to understand the special spiritual dimensions of WBT and SIL ministry so as to support each other vigorously in prayer and practical help.
8. That each member be able to adopt the life-style which is most appropriate to place and kind of service in which he/she will be involved in WBT and SIL.
9. That each member be able to recognize that possessions are God’s, and are to be utilized and cared for as His.
10. That each member be able to recognize that possessions are less important than the people being served.
11. That each member be able to understand, and accept, our non-sectarian emphasis upon service to all...
12. That each member be able to understand, and accept, our distinctive of trusting God for all aspects of life and service.

<sup>291</sup>(see τελειος and the idea of “maturity” or “perfection”--cf. Mt. 5:48; Rom. 12: 2; I Cor. 2:6; II Cor. 12:9; Gal. 3:3ff in a negative sense; Phil. 3:7-16--esp. v. 12,15; Col. 1:27,28; Col.4:12; II Tim.3:17; Heb. 13:21; Jas. 1:4; 3:2; I Pet. 5:10; I Jn. 4:17,18.)

<sup>292</sup>John Powell, Characteristics That Make or Break Missionary Service, personal notes from IFMA/EFMA Personnel Directors Workshop, Dec. 2-4, 1988.

## **Ministry Skills**

John Lapp envisions mission along seven lines, utilizing the term “gaining ground for God,” believing all to be important: 1) gaining ground through living in a godly way [presence evangelism], 2) gaining ground through the accession of new adherents, the important ministry of evangelism [“proclamation” and “persuasion” evangelism], 3) gaining ground through the nurture of people into lives of discipleship, education as mission, [discipleship and education], 4) gaining ground through the creation of new communities of commitment, [church-planting and church-development], 5) gaining ground by demonstrating compassion to the victims, the marginalized and powerless people of the world [medical missions, famine relief, community development, etc.], 6) gaining ground by joining the debate in the public square on the meaning of peace and justice for cities, nations, and the environment, and 7) “gaining ground through ‘the penetration of meaning’ for cultures in disarray,” meaning giving greater attention to the impact of the gospel in the contexts of traditional religious expressions and ethnicity<sup>293</sup> [issues of contextualization]. The majority of evangelical Protestant missionaries would focus their activities in mission to the first five points above: presence, proclamation, and persuasion evangelism, discipleship/Christian education, church-planting and church-development, and social activities such as medical ministries, education, famine relief, and community development.<sup>294</sup>

With the wide variety of professional, technical, and specialized activities that are possible the following discussion will centre only on a brief listing of those items that relate to the “classical” missionary task of evangelism, church-planting, and church-development.

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<sup>293</sup>John A. Lapp, "Global Mission in the 1990s," Mission Focus 17 (1989): 73 - 76. Items in brackets are my interpretation of what he has written.

<sup>294</sup>For example, George Peters writing of the types of missionaries needed, identified these five points when he gave the following listing: “1) Men of God, men of inner strength, repose, and stability, men of purpose and resourcefulness. Textbook knowledge will soon give out in new and changing circumstances. Today’s missionary faces circumstances for which missionary history provides no precedent, and a new missionary cannot be regarded merely as a replacement for his predecessor. He is a pioneer in deeper dimensions even though not in geographical expansion. Only creativity and resourcefulness will save him from a life of frustration, inefficiency, or defeat. 2) Teacher-preacher missionaries, who have a message and who are able to communicate it within the framework of national culture, psychology, and sociology, in order to make it more relevant to the present situation. This is more than exposition. It is exposition plus implications for personal, social, and cultural life. 3) Missionary statesmen and compassionate evangelists, who are able to enter into the strategy of the Holy Spirit in effective programs of evangelism, and who are able to lead others into them as well. 4) Churchmen, who build the church and inspire her to build herself according to the purpose and plan of God in keeping with indigenous cultures as far as possible and yet as a light in the community. 5) Disciples, who are willing to identify with believers in other lands and cultures, to help them individually and as churches to grow as Christ’s disciples. This can be done only through identification and intimate fellowship. 6) Brethren who are willing to de-Americanize and to be integrated into the churches of other cultures and lands and together minister to the needs of the world.” George W. Peters, "Training Missionaries for Today's World," Evangelical Missions Quarterly 2 (1965): 27. Peters also could have emphasized the need to work together with and under the leadership of national believers to help them develop their ministries and the church.



1. **Language Learning Skills:**<sup>295</sup> formal (ie. language schools) and nonformal language learning (ie. Language Acquisition Made Practical/LAMP<sup>296</sup> and Barefoot Approach to Language Learning/ BALL<sup>297</sup>), listening,<sup>298</sup> analyzing communication exchanges, having sensitivity to values, meanings, and attitudes recognizing how these influence behaviour, learning to use parables, proverbs, etc; having ability to speak understandably, paying attention to non-verbal communication (physical action, eyes, facial expressions) and contextual meanings developed in face to face encounters.
2. **Information Source Development:** observing and questioning, developing ability to use the many information sources within the cultural and social environment; having receptivity to new ways, new ideas, new people; having ability to handle ambiguity and see the broader context in isolated experiences.
3. **Culture Learning Skills:** developing ethnographic skills--including the study of such areas as religious beliefs and world views,<sup>299</sup> patterns of thinking, social practices, leadership roles, social organization, politics, economics, kinship relationships, inter-group relationships, etc. Understanding how to fit missionary life and work biblically into cultural realities.<sup>300</sup>
4. **Self-understanding:** having greater awareness and insight into one's own learning processes, strengths, weaknesses, successes, failures, biases, values, goals, and emotions, maintaining honesty with oneself and with what one is, having tolerance for ambiguity and change, developing capacity to deal with criticism, hostility, fear, and willingness to

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<sup>295</sup>For further excellent material on language learning see the following: Andrew Cohen, "Successful Second-Language Speakers: A Review of Research Literature," Balshanut Shimushit. The Journal of the Israel Association 1 (1977): 3-21.

N. Naiman, M. Fröhlich and H. H. Stern, The Good Language Learner, (Toronto, Ontario: Modern Language Center, Ontario Institute for Studies in Education, 1975).

N. Naiman, M. Fröhlich and A. Todesco, "The Good Second Language Learner," TESL Talk 6 (1975): 58-76.

Anthony Papalia and Joseph Zampogna, "Strategies Used by FL Students in Deriving Meaning From a Written Text and In Learning Vocabulary," Language Association Bulletin 29 (1977): 7-8.

Joan Rubin, "What the Good Language Learner Can Teach Us," TESOL Quarterly 9 (1975): 41-51.

H. H. Stern, "What Can We Learn From the Good Language Learner," Canadian Modern Language Review 31 (1975): 304-318.

G. R. Tucker, E. Hamayan and F. H. Genessee, "Affective, Cognitive, and Social Factors in Second Language Acquisition," Canadian Modern Language Review 32 (1976): 214-226.

<sup>296</sup>E. Thomas Brewster and Elizabeth S. Brewster, Language Acquisition Made Practical, (Colorado Springs, CO: Lingua House, 1976).

<sup>297</sup>A field-based method of language learning developed by Toronto Institute of Linguistics, Toronto, Ontario, Canada.

<sup>298</sup>James R. Nord, "Shut-Up and Listen, A Case for Listening Comprehension," (East Lansing, Michigan: Michigan State University, n.d., ERIC document #ED 122 839), pp. 1-6.

<sup>299</sup>The following authors stress the need for missionaries to understand not only the power of traditional religion in society but also pluralism, new religious movements, and the spread of pantheistic religion: Stan Nussbaum, "New Religious Movements: The Neglected Component of Missionary Preparation," Mission Focus 16 (1988): 29 - 32.

Alan R. Tippett, "Probing Missionary Inadequacies at the Popular Level," The International Review of Missions 49 (1960): 411-419.

Won Yong Ji, "Mission in the 21st Century: A New Ball Game!," St. Louis, Missouri: Annual Convention of American Association of Bible Colleges, 1990), pp. 1 - 20.

<sup>300</sup>See for example, Paul G. Hiebert, Anthropological Insights for Missionaries, (Grand Rapids, Michigan: Baker Book House, 1985).

accept responsibility for one's action, as well as development of perspective, balance, and judgement.

5. **Interpersonal Interaction**: becoming involved with people beyond the superficial by giving and inspiring trust and confidence, establishing a basis for mutual liking and respect, and caring enough to act in ways that are truthful and sensitive to the feelings and needs of others, learning to work with and under national leadership, being sensitive to the wisdom of nationals. Identifying with, adapting to, and appreciating a given people and culture; reestablishing friendships that are genuine; relating to community leadership; learning and utilizing acceptable channels of communication in a community; discovering how communication takes place into and out of a community; living in peace and unity with others; communicating feelings as appropriate.
6. **Decision-making**: ability to come to conclusions (based on assessment of the information available) and to take action; in problem solving, being explicit about the problem, working out steps to a solution, and generating alternatives. Ability to properly assess needs, and situations, and take appropriate action. Ability to apply the cognitive knowledge and insights that one has to the situation at hand. Setting goals and objectives; writing job descriptions; delegating work; analyzing problems; time management; handling complaints; writing reports; negotiating agreements; financial management; developing teams; identifying and developing new ministry opportunities
7. **Research and Planning Skills**: knowing how to analyze an area for evangelism to find the "unreached," understand their needs, longings, aspirations, and questions, and set out a strategy in view of a) class-level, b) religious beliefs, c) political situation, d) societal realities, e) patterns of communication, and f) other salient aspects critical to a well-rounded strategy.
8. **Evangelistic Skills**: ability to make initial contacts with people that one desires to share the good news (gospel) with; ability to witness in light of cultural world-view, popular religious beliefs, acceptable media, thought and communication patterns, and various resistance factors; skills with various types of evangelistic outreach--open-air/street meetings, one-to-one, literature evangelism, Bible studies,<sup>301</sup> new and creative forms specific to the cultural situation, etc.; creativity and discipline in following through on strategic planning and flexibility to change as needed. Ability to select and use appropriate visual aids for clear evangelistic communication. Knowledge of and ability to handle "spiritual warfare" in ministry.
9. **Church-planting Skills**: developing follow-up programs for new believers; finding, preparing, and choosing follow-up materials appropriate for the culture and the educational level of new believers; teaching basics, bringing new believers into fellowship; forming the church into both biblically and culturally acceptable structures; dealing with problems that arise out of church-planting; developing group participation; developing team-ministry; encouraging the development of nationals in their vision and skills for church-planting.
10. **Church-development Skills**: developing church leadership--spiritual growth, biblical knowledge, ministry skills, and culturally acceptable leadership, teaching believers to develop their own evangelistic and discipleship ministries, teaching Biblical truth to develop believers toward maturity, enabling believers to undertake "critical contextualization" (i.e. bringing their social/cultural practices under biblical assessment and formulating alternatives if deemed necessary), utilizing effective methods such as modelling skills, creative critiquing and being critiqued, lending books, using correspondence courses, giving practical Bible studies, sensitive involvement in the life and ministry of others, etc.;

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<sup>301</sup> A good argument for the central use of the Scriptures in evangelism is in Fergus Macdonald, Word Evangelism, (Edinburgh, Scotland: Handsel Press and Rutherford House, 1990).



### **Levels of Competence**

As all that has been written so far indicates, competence is a multi-dimensional, complex process made even more complicated by the ambiguities, differences, and stresses within the cross-cultural context. Several hierarchical conceptualizations of how communication competence takes place have been suggested.<sup>302</sup> Only that by Parks<sup>303</sup> (based on Power's control theory<sup>304</sup> and its extension by Carver and Scheier<sup>305</sup>) will be considered here as one of the most heuristic, conceptually-broad, and integrative hierarchies. According to Parks, there are nine levels of competence, from the most basic physiological capacities to the most complex cognitive levels. All are cybernetically interconnected by feedback loops from levels above and below in terms of the "reference values" (goals) of each level in order to create and maintain a specific desired condition. The reference values or goals of each level differ but all work together to produce and direct behaviour. These goals change as the physical and social environment changes in order to modify behaviour to accomplish competent behaviour. If the probability of satisfying the goals falls too low, the individual will attempt to withdraw from the situation. The process continues immediately, however, upon entering another situation. Parks considers competence itself to be determined by the extent to which the behaviour satisfies the individual's reference values (since self-perceived competence is, in his view, one type of competence).<sup>306</sup>

Level 1 competency is "intensity control," the basic level of sensory contact with the outside world, including muscle movements and spinal activities. Individuals with muscular diseases that deprive them of the ability to move are seriously curtailed behaviourally. Level 2 competency is "sensation control" where sensory information is directed into packages for directing muscular activity. This level is closely related to level 1 and is equally important since all muscular action must come through this level. A person who is a quadriplegic, experiencing massive damage at this level, has a reduced range of skills and competencies. Level 3 competency is "configuration control" where the "packages of control" from level two are directed into broader configurations such as movement of limbs as desired, body

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<sup>302</sup>For example, R.R. Allen, et al., "The Nature of Communication Competence," in Developing Communication Competence in Children, R.R. Allen and Kenneth L. Brown (ed.) (Skokie, Illinois: National Textbook Company, 1976), pp. 247-255. Also W. Barnett Pearce, Vernan E. Cronan and F. Conklin, "On What to Look at When Analyzing Communication: A Hierarchical Model of Actor's Meanings," Communication 4 (1979): 195-220.

<sup>303</sup>Malcolm R. Parks, "Interpersonal Communication and the Quest for Personal Competence," pp. 177-187.

<sup>304</sup>W. T. Powers, Behavior: The Control of Perception. (Chicago: Aldine, 1979).

<sup>305</sup>C. S. Carver and M. F. Scheier, "Control Theory: A Useful Conceptual Framework for Personality-Social, Clinical, and Health Psychology." Psychological Bulletin 92 (1982): 111-135.

<sup>306</sup>Parks, p. 177.

posture and position, perception of visual forms, and speech action (phonemics). This level permits very basic verbal and nonverbal action to take place.

Level 4 competency is “transition control” which allows the execution of organized movements, such as nodding the head, raising a hand, changing voice pitch and tone, and pronouncing words. This is a level of coordination but does not necessarily tell what actions should be or why they are to be performed. Level 5 competency is “sequence control” which places the varying unified behaviours into a sequence, such as placing words into a sentence, following through in a sequence of actions that produce a recognizable gesture. Because this level creates and recognizes sequences, self perception as well as perception of the environment and of the behaviours of others takes place. Perception and actions are organized here in order to serve the reference values (goals) of the higher levels. The primary skill becomes that of discriminating between the various sequence segments of perception and of behaviour (as for example, accurately reading nonverbal cues and decoding speech, mood, and other salient communicative elements). A secondary skill is the timing of the sequences in interrelationships and communication.<sup>307</sup> The level of this skill is determined by lower order skills and the goals of the higher orders.

Level 6 competency is “relationship control,” the ability to detect and behaviourally respond to the broader events in the environment, the plans and actions of others, and the communicator’s own actions. “These relationships are of many types: cause-effect, exclusive-inclusive, statistical, space-time, association, and implication.”<sup>308</sup> This is the level where categorisation takes place (whereby actions, events, items, people, etc. are organized into categories or constructs) and as a result attribution of causes pertaining to other people’s behaviour occurs. Degrees of differentiation and abstraction (cognitive complexity), which are correlated positively to communication competence, appear to be part of the relationship control level (although only insofar as they are required to support higher-order levels). Not only is the skill of relationship identification necessary at this level but also the ability to identify attribution biases<sup>309</sup> and their potential results.

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<sup>307</sup>That is, the ability to take turns as required in conversation, conveying messages (of, for example, sympathy, rapport, encouragement) at the appropriate moment in communication with others.

<sup>308</sup>Ibid., p. 180.

<sup>309</sup>“Among the biases we routinely bring to the attribution process are tendencies to give more weight to information that is vivid, concrete, or readily available; to treat a very small amount of information as if it were highly representative; to search only for information that confirms our preconceptions; to distort or ignore information that violates our expectations; and to overestimate the consistency and constancy of others’ behavior. Our efforts to understand behavior are also biased by tendencies to rely on *a priori* ideas of what types of causes ought to go with certain types of effects, to prefer simple explanations over complex ones, to prefer explanations that easily present themselves, to underestimate situational influences on other’s behavior and to prefer instead internal or dispositional causes for their behavior, to undervalue information about how a person’s behavior compares to others’ behavior in the same situation, and to treat genuinely irrelevant information as if it were relevant.” Ibid., p. 181.



Level 7 competency is “program control,” related to the broader ability to organize the multiple constructs and categories into correlated and coherent frameworks or “programs,” “schemata,” or “scripts,” which act to direct action in situations as well as help to predict and explain the behaviours and actions of others. These programs are “general plans for action and evaluation” (decision-making mechanisms) which serve not only to reduce the amount of effort needed to think plans through in situations but also serve as models of behaviour in new or ambiguous circumstances. Much of our action in the ordinary day may be “mindless” in the sense that we don’t have to think out every action and response in our work and interpersonal interactions because we have done them so often.<sup>310</sup> There are scripts or programs for most events and our minds can work on other problems.<sup>311</sup> It is assumed that adults have thousands of programs, some representing verbal and some non-verbal forms, others as episodic, categorical, and hypothetical vignettes. Parks emphasizes that competency at this level calls more for the adequacy of the repertoire of programs rather than the number. Many of these programs are associated with specific skills, such as perceptive listening, questioning, organizing messages, using adequate vocabulary, facial expressions and other paralanguage, distinguishing fact from opinion, etc.

Level 8 competency is “principle control” which produces the general principles that determine which programs will be enacted, creates new programs, and evaluates the results of programs in achieving one’s goals. The example that Parks uses is that of an individual who’s principle is to “follow through on commitments” with respect to returning borrowed class notes to a friend. Adherence to this principle sets in motion a sequence of activities that move downward through the entire hierarchy. Competence at this level relates to the ability to select or create the programs that permit the fulfilment of the goals inherent in the principles. This, in turn, may depend on the levels of differentiation, types of attribution, and/or other relationships as perceived on the next lower-level. Creativity and the ability to pursue goals in the midst of adverse situations (as is the case in another culture) or where existing programs have been disrupted is a critical competency. For missionaries, the capacity to translate ideals into contextualized behaviours that maintain personal morale and self-esteem yet are flexible and appropriate for the cultural context is an important competency (e.g., ethical issues such as use of bribes, alcohol consumption, etc.)

Level 9 competency is a “system concept control,” referred to as “idealized self-concepts.” Using the previous example, the ideal “I will be a responsible person” triggered the principle “follow through on commitments.” This level for missionaries has to do with

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<sup>310</sup>Persistent mindlessness, or overadherence to any one program, has the effect of reducing one’s competence through failure to attend to situational and individual cues.

<sup>311</sup>Barry R. Schlenker, *Impression Management*, p. 29-33.

Christian values, personal ideals, and missionary principles that determine courses of action in the midst of alternatives, resulting in persistence even under difficulty. Failure at the system concept level will result in premature attrition from culture and language learning as well as from ministry. Clearly the ability to translate these ideals and values into guiding principles is a critical competency. Parks tabulated these specific competency levels this way:

**TABLE 7: Taxonomy of Levels of Competence and Control<sup>312</sup>**

LEVEL OF CONTROL	COMPETENCY
System Concept	Ability to satisfy personal goals in a given context without jeopardizing more important goals in other contexts Ability to translate idealized self-concepts into principles of social action. Ability to use cognitive strategies to preserve the perception of competence when failure occurs
Principle Control	Ability to improvise plans of action when interaction is disrupted. Ability to translate principles of action into specific programs of action. Ability to recontextualize information across situational domains. Ability to monitor awareness levels and adjust them to the degree of change in the situation.
Program Control	Ability to organize diverse constructs and attributions into a coherent plan of action. Ability to draw on a repertoire of programs sufficiently large to address situational needs. Ability to predict and explain another's behaviour, to empathize or role-take to the degree required to satisfy one's personal goals.
Relationship Control	Ability to construe one's own actions and the actions of others from a variety of perspectives. Ability to revise construals of events and people in accordance with one's goals and changing situational demands. Ability to recognize and adjust to common attributional biases.
Sequence Control	Ability to decode verbal and nonverbal cues accurately enough to pursue one's personal goals. Ability to produce verbal and nonverbal codes in relevant sequences or "chunks."
Transition Control Configuration Control	Ability to organize muscle movements into decodable nonverbal cues and words Ability to decode sensations into nonverbal cues and words.
Sensation Control Intensity Control	Ability to organize specific muscle movements into discrete pieces of verbal and nonverbal cues. Ability to faithfully code and decode sensory information.

Pearce and Cronen in their theory of Coordinated Management of Meaning refer to three levels of competence. The lowest level is *minimal competence*. Minimal competence occurs first, when an individual's cognitive system is less complex than the interpersonal or social system, resulting in inability to adequately differentiate among the array of phenomena confronted. It occurs secondly, when the individual is limited in ability to contextualize his

<sup>312</sup>Parks, *idem.*, pp. 185-186.



or her actions to the situations, unable to see the consequences of actions, to anticipate or predict responses or behaviour. Thirdly, if the social or interpersonal system as a whole is unclear or miscomprehended, including social rules, morés, norms, and standards, the result will be minimal competence. Such an individual is caught at Park's "sequence" or "relationship" levels, resulting in lack of freedom at the higher hierarchical levels.<sup>313</sup> Sojourners, in most cases, until language and social conventions have been learned, function at the level of minimal competence in intercultural interaction.

The second level is *satisfactory competence* which is the ability to behave effectively *within the logic of the system*, "to produce coherent episodes with other comparably competent persons,...to interpret the implications of particular messages in context, align meanings and actions with others, take the other's perspective,"<sup>314</sup> and adapt for efficient communication and interaction. Normal satisfactory individuals fit the norms of the group, while clever satisfactory individuals are exceptionally original within the boundaries of the system, but never question those boundaries. Examples given are the football coach who is "smart enough to figure out how to win games but dumb enough to think it's important," and heroes like Fleming's James Bond and MacLean's protagonists in Force 10 from Navarrone who effectively manoeuvre under incredible odds but never question the legitimacy of the acts and meanings in it.

*Optimal competence* is the ability to be successfully competent but not controlled by the system, able to see the boundaries of the system and choose to fit in or to be unique. Unfortunately, ability to see the boundaries of the system can result in alienation, where the individual is able to critique the illogic and faults of a system but not able to feel at ease in it. On the other hand, individuals who have *transcending* optimal competence see all systems (and cultures) as "bounded logics" but are able to live and interact comfortably in several systems.<sup>315</sup> Stephen Bochner's "mediating man"<sup>316</sup> and Adler's "multicultural man"<sup>317</sup> would appear to be prototypes of *optimal competence*, though human capacity to be optimal according to the ideals formulated by Pearce, Bochner, and Adler is questionable. Nevertheless, the move beyond enmeshment in the norms of one culture alone to functional bicultural (or multicultural) competency is a possibility.

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<sup>313</sup>W. Barnett Pearce and Vernon E. Cronan, Communication Action and Meaning: The Creation of Social Realities, (New York: Praeger Publishers, 1980), pp. 199-200.

<sup>314</sup>Ibid., p. 200.

<sup>315</sup>Ibid, pp. 205-209

<sup>316</sup>Stephen Bochner, "The Mediating Man and Cultural Diversity," in Culture Learning: Concepts, Applications, and Research, Richard W. Brislin (ed.) (Honolulu, Hawaii: East-West Center, University Press of Hawaii, 1977) , pp. 3-41.

<sup>317</sup>Peter S. Adler, "Beyond Cultural Identity: Reflections Upon Cultural and Multi-cultural Man.," Topics in Culture Learning 2 (1974): 23-41.

## **Models of Competence**

A number of models of intercultural competence (ICC) have been proposed, some of which will be considered in this section. To first establish a groundwork a general model of relational competence proposed by Breen, Donlon, and Whitaker will be considered.

### **The CAEL Model of Competence**

Breen, Donlon, and Whitaker of the Counsel for Assessment of Experiential Learning (CAEL) developed a two-part model of interpersonal competence. The first part was designated “interpersonal literacy” as a *basic* model of communication (the “communication nucleus”). The authors defined interpersonal literacy as “knowing *when* and *how* to communicate *what* to *whom* in order to achieve specified goals.”<sup>318</sup> This basic “literacy” includes timing of communication (ebb and flow of communication pattern), the medium used (oral, written, non-verbal, and other media), the content (appropriate data, questions, behaviours, and feelings), characteristics of the target to keep in mind, and use of communication skills to maximize attainment of goals congruent with one’s own and the other’s needs.

At the core of communication literacy are variables that affect choice of behaviours: 1) the affective qualities of self<sup>319</sup> and others, including feelings, attitudes, values, and beliefs, 2) the sociocultural variables, and 3) intentions, goals, and resources that communicators have, and their perceptions about the intentions, goals, and resources of others. The *sociocultural variables* are learned informally and generally taken for granted in one’s own culture; learned through trial and error in another culture but certainly critical for communication in any culture. These variables include a) *demographic variables*: age, sex, race, role, social status, economic status, group type, group size;<sup>320</sup> b) *rules of social behaviour* : informal customs (etiquette, manners--the do’s and don’ts of everyday life) and formal customs (for ceremonies such as weddings, funerals, etc.); c) *societal beliefs*, religious, societal, philosophical, political, etc., and d) *societal values*, family, monetary, security, health, etc. These variables essentially tie the individual to the situational factors and their implications on how interpersonal interaction will take place.

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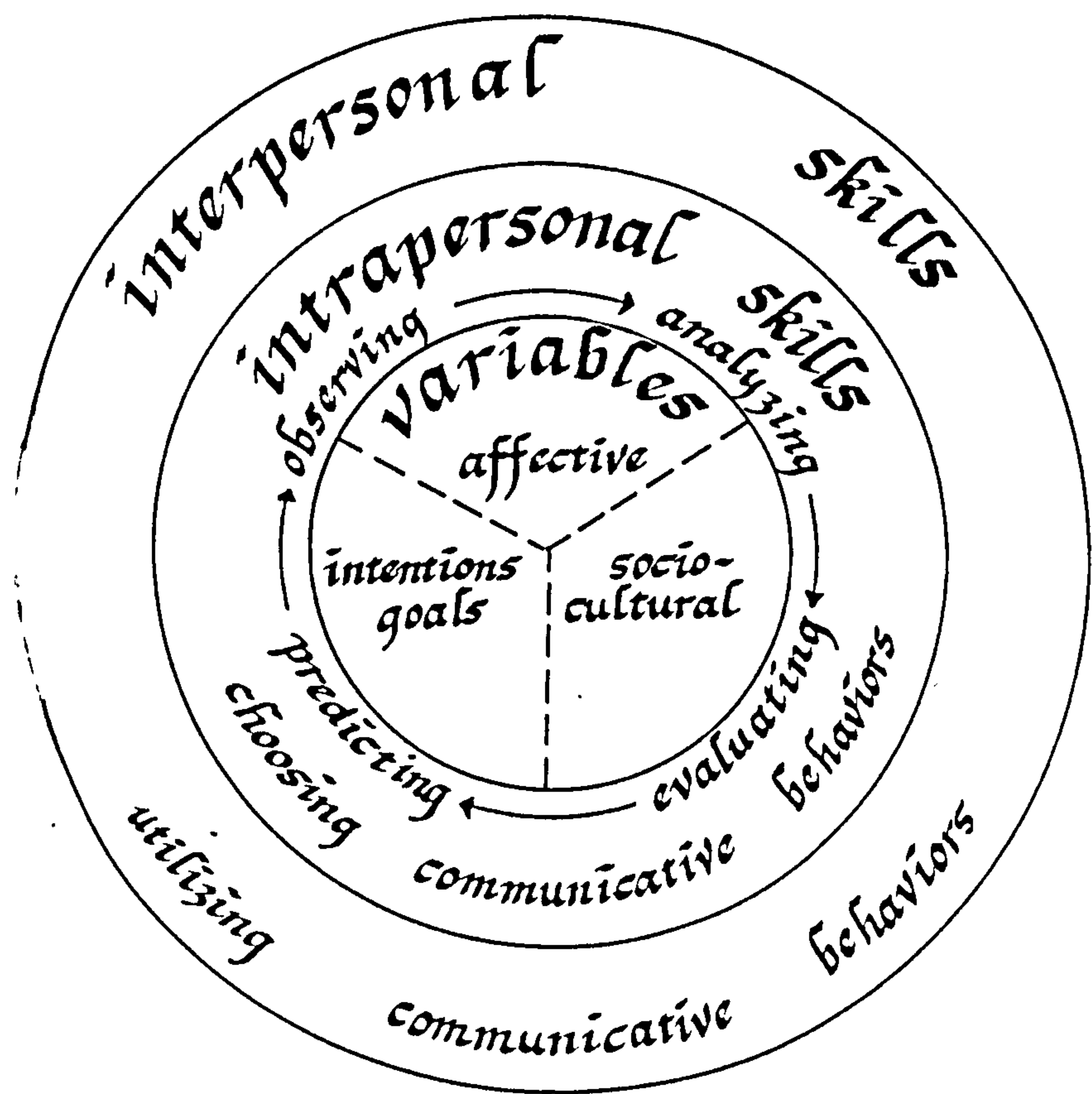
<sup>318</sup>Paul Breen, Thomas F. Doulon and Urban Whitaker, Teaching and Assessing Interpersonal Competence - A CAEL Handbook, (Columbia, MD: CAEL, 1977), p. 8.

<sup>319</sup>The authors list Carkhuff’s six affective skills for the helping professions: 1) empathetic understanding, 2) communication of respect, 3) personally relevant concreteness, 4) facilitative genuineness, 5) facilitative self-disclosure, and 6) positive personal regard. It must be kept in mind that these must be relevant to each cultural context. For example, acceptable display of respect differs considerably between New York City, and Tokyo, Japan. Robert R. Carkhuff, “Helping and Human Relations: A Brief Guide for Training Lay Helpers,” p. 174. Paul Breen, et. al., p. 17.

<sup>320</sup>In many cultures, a different vocabulary is used for different age sets, sexes, roles, etc.

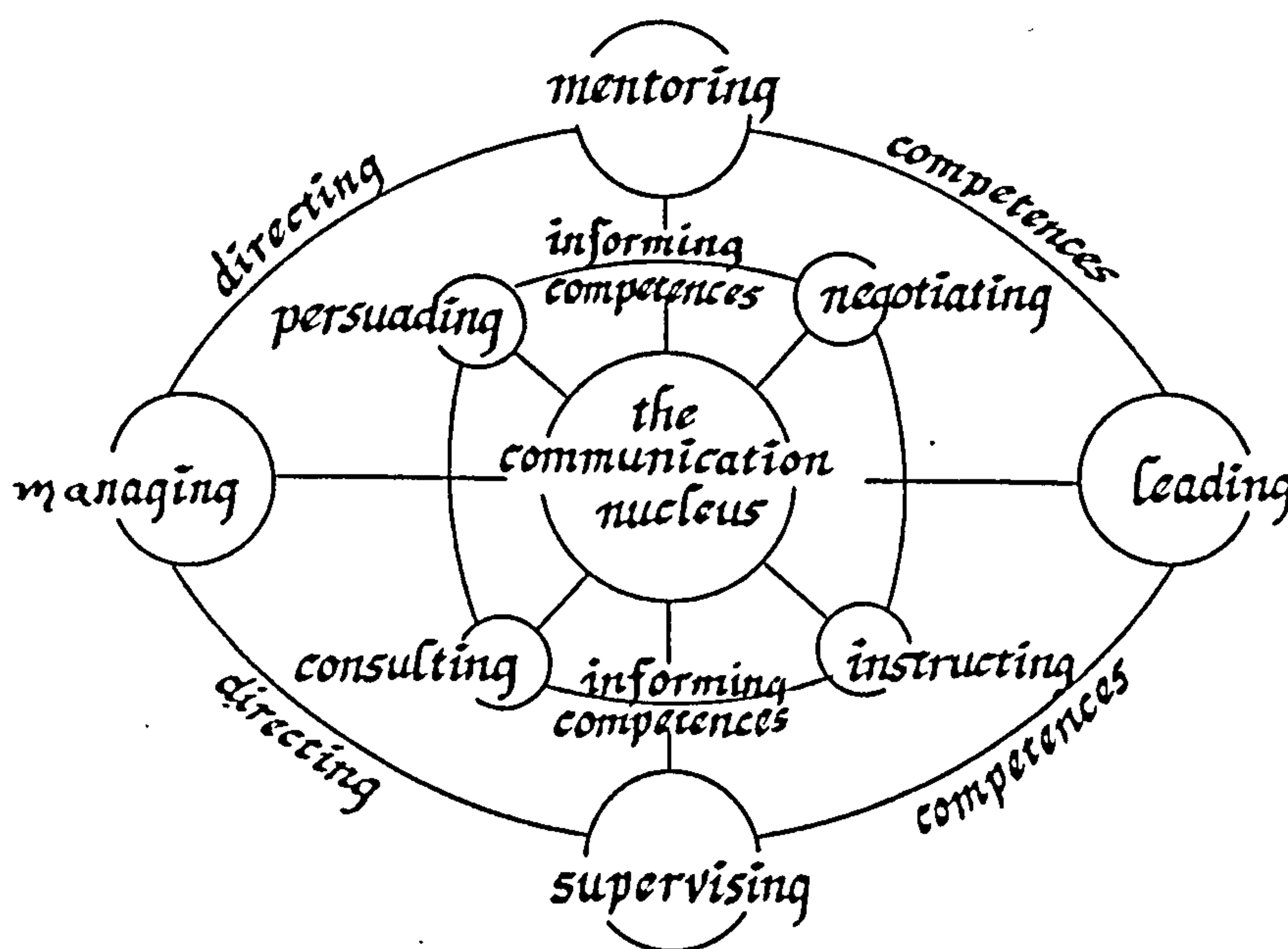


FIGURE 7: Interpersonal Literacy, Basic Communication Model<sup>321</sup>



An individual's *intrapersonal skills* relate the social variable to the individual's communicative behaviour. It is at this level that communication *choices* are made, identifying which activities best fit the situation. The steps involved are 1) self-assessment of intentions/goals, affective state, sociocultural factors, 2) attempts to perceive intentions/goals, affective states, and sociocultural realities of others in the situation, 3) selection of communicative behaviours congruent with these factors, 4) monitoring and evaluation of feedback on self, others, and effectiveness of behaviours enacted, and 5) adjustment of behaviours on the basis of observation and evaluation. The *intrapersonal* skills (observation, analysis, evaluation, and prediction) merge with *interpersonal* behaviour at the point of communication. It is at this level that the first and second models merge into a larger dynamic model of interpersonal competence.

<sup>321</sup>Ibid., p. 19.

FIGURE 8: A Model of Interpersonal Competence, Dynamic Version<sup>322</sup>

This dynamic model identifies two sets or clusters of competencies: 1) informing competencies, such as persuading, negotiating, instructing, and consulting, and 2) directing competencies, such as mentoring, leading, supervising, and managing. This model could be perceived of as sets of rotating rings: the communication nucleus (described above in the first model) always making communication decisions while the communication competencies of the second and third rings are drawn upon interchangeably to provide skills as needed for any situation. Four of these skills are person-dominant (persuading and negotiating as well as mentoring and leading) and four are role-dominant (consulting and instructing as well as managing and supervising--which tend to be specified or prescribed by institutional work). Depending on one's situation, work, context, few or all of these may be called into use. Person-dominant behaviours require greater flexibility and adaptability for effectiveness, possibly one of the reasons why people in the cross-cultural context tend to gravitate to institutional work.<sup>323</sup>

### Spitzberg and Cupach's Model of Competence

Spitzberg and Cupach's model is composed of seven interrelated assumptions which comprise a "gestaltic" view of competence in communication. The first of these assumptions

<sup>322</sup>Ibid., p. 35.

<sup>323</sup>Regarding missionaries on this tendency see Ron Fisher, "Why Don't We Have More Church-Planting Missionaries?," *Evangelical Missions Quarterly* 14 (1978): 205-211. Regarding technical assistance workers on this same tendency see Frank Hawes and Daniel J. Kealey, "An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment," *International Journal of Intercultural Relations* 5 (1981): 254-258.



is that “competence is perceived *appropriateness* and *effectiveness*... Relational competence can be defended conceptually as the extent to which objectives functionally related to communication are fulfilled through cooperative interaction appropriate to the interpersonal context.”<sup>324</sup> The authors identify appropriateness in the same way that Wiemann and Backlund do:

Appropriateness generally refers to the ability of an interactant to meet the basic contextual requirements of the situation--to be effective in a general sense. ...These contextual requirements include: (1) The verbal context, that is, making sense in terms of wording, of statements, and of topic; (2) the relationship context, that is, the structuring, type and style of messages so that they are consonant with the particular relationship at hand; and (3) the environmental context, that is, the consideration of constraints imposed on message making by the symbolic and physical environments.<sup>325</sup>

Appropriateness in most cases suggests adherence to rules and norms of interactions. Effectiveness, on the other hand, is related to the functional achievement of goals and objectives, satisfaction of needs, desires, and goals of interactants, and maintenance of interpersonal rapport. The authors qualify both qualities by suggesting that competence must also be perceived in terms of its quality of excellence, since appropriateness and effectiveness can be short of excellent communication.

A second assumption is that competence is *contextual*, the situational norms, rules, expectations, and exigencies of the context determining how communication should take place. Not only is behaviour prescribed or proscribed in a macro-social sense, but on the micro-level of interaction between two individuals appropriateness of behaviour is mutually defined, requiring contextual sensitivity, flexibility,<sup>326</sup> and such cognitive processes as empathy, role-taking, and problem-solving skills.

A third assumption is that competence is *a matter of degree*. Elements of incompetent behaviour may be intermixed in an interaction with generally competent behaviour. Furthermore, people tend to be more competent in certain situations, with certain people, and with certain topics or activities than at other times and with other people or topics/activities. Fourthly, competence is both *molar* and *molecular*. “Molecular behaviors

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<sup>324</sup>Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, p. 100.

<sup>325</sup>John M. Wiemann and Philip Backlund, "Current Theory and Research in Communicative Competence," Review of Educational Research 50 (1980): p. 191.

<sup>326</sup>“Flexibility requires a “large and strategic repertoire of behavior, the ability to select and implement behaviors appropriate to the situation, and the creativity to enact routines to cope with novel and unexpected situations. In short, the hallmark of behavioral flexibility is the adaptation of communication to situations. This behavioral flexibility in turn relies on the individual’s ability to discern the relevant characteristics of the situation that ‘correspond’ to the person’s available repertoire of behavior. “It is thus a mark of competent interaction that actors have not only a well-developed discriminative facility but also a highly developed capacity for what Piaget calls “accommodation” of familiar patterns of thought and action to the ever-changing particularities of immediate situations.” (Athay and Darley, 1981, p. 297)” Spitzberg and Cupach, *idem.*, p. 108.

provide specific communicative indicators of competence and provide a reference point for skill enhancement. Molar impressions provide evaluative outcome criteria.”<sup>327</sup>

Fifth, competent communication and interaction is *functional*, meaning that people accomplish goals through it, whether intentionally or not. These goals tend to relate to either instrumental objectives (personal goals), interpersonal objectives (relational goals), or identity objectives (sense of self). Sixth, competence is an *interdependent process*, meaning that communicative and interactional competence can only be in the context of a relationship. While this appears obvious, it is critical. Accomplishment of personal goals without enabling others to accomplish their goals in the same interaction is less than competent since it may hinder future interaction. Feedback from others on levels of their satisfaction enhances personal satisfaction. Closely related to this is the seventh assumption, that is, that competence is an *interpersonal impression*. While personality traits and effective behavioural skills are important ultimately if no one perceives the interactant as competent, his actual functional competence (keeping in mind context and future needs for interaction) is questionable.<sup>328</sup>

Assuming these factors, Spitzberg and Cupach’s model is composed of four personal components and a complex contextual component. This model posits that an individual must have knowledge (both know *what* and the know *why*) as well as the skills (the ability to perform appropriately in a social setting, the know *how* and the *can do*). The first personal component is *motivation*. Every interpersonal encounter has affective reaction at some point on the approach-avoidance continuum. Every encounter requires motivation to approach,<sup>329</sup> especially within difficult situations and in the cross-cultural context. Anxiety, an avoidance construct, results in fear, postural rigidity, palpitations and perspiration, and often minimal response.<sup>330</sup> Its counterpart, confidence, results in positive posturing, altercentrism (other-orientedness), attentiveness, and openness to communicative immediacy cues (nods, smiles, gestures, eye contact, etc.).<sup>331</sup> Williams states it,

Higher motivational levels of competence are associated with greater breadth and clarity of perception, increased attention span, and greater receptivity to relevant stimuli. This allows for a better ordering of alternative pathways and

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<sup>327</sup>Ibid., p.111.

<sup>328</sup>Ibid., p. 115-116.

<sup>329</sup>James C. McCroskey and Virginia P. Richmond, "Willingness to Communicate," in Personality and Interpersonal Communication, James C. McCroskey and John A. Daly (ed.) Sage Series in Interpersonal Communication, 6 (Beverly Hills, CA: Sage Publishers, 1987), pp. 129-156.

<sup>330</sup>See section on Types of Social Inadequacy and Distress, Michael Argyle, "Interaction Skills and Social Competence.," in The Social Psychology of Psychological Problems, Philip Feldman and Jim Orford (ed.) (Chichester, England: John Wiley and Sons, 1980), pp. 139-143.

<sup>331</sup>Robert A Bell, "Social Involvement," in Personality and Interpersonal Communication, James C. McCroskey and John A. Daly (ed.) Sage Series in Interpersonal Communication, 6 (Beverly Hills, CA: Sage Publishers, 1987), pp. 195-242.



choices, greater insight into situations, and an extended future perspective. Higher motivational levels are associated with greater cognitive complexity, the ability to engage in creative or divergent thinking, and the behaviour productivity that would be expected to characterize the highly competence personality.<sup>332</sup>

A second component of their model is *knowledge* of 1) situational rules, norms, and morés, 2) the higher-levels skills of being able to monitor the situation for cues that inform for adaptation of further interactive behaviours, 3) knowledge of “person types” and their variety of trait domains (or the specific personality and behaviour traits of particular individuals that one is dealing with, as for example the difference in relating to a dynamic “extrovert” as to a reflective “introvert”), 4) problem-solving skills and interpersonal relationship-maintenance skills, and 5) the “repertoires of behavioural patterns, tactics, and strategies that constitute a given individual’s social heuristic for enacting dialogue.”<sup>333</sup>

The third component is *skill*, that is, the actual capacity to effectively and creatively apply personal knowledge to the situation. Knowledge does not necessarily indicate applicational skills. One of the fundamental assumption errors of the “schooling model” of education is that acquisition of knowledge results in capacity to apply that knowledge.<sup>334</sup> Professional education almost universally requires internships, field education, apprenticeships, and other skill-development training.<sup>335</sup> “...findings suggest that knowledge and skills may be independent, lending legitimacy to Bandura’s (1980) statement that ‘people often do not behave optimally, even though they know full well what to do.’”<sup>336</sup> Competent communication interaction should result in *criterion outcomes* (the fourth component) of “communication satisfaction, feeling good, interpersonal attraction, interpersonal solidarity, relational satisfaction, relational trust, negotiation and conflict satisfaction, and certain forms of intimacy.”<sup>337</sup> The level of criterion expectancy on the part of the interactants will be episodic or relational (or both) depending on the interaction and its history.

Finally, as has been often reiterated, *context* is a powerful mesh that influences interactions in numerous ways. Drawing on the work of Thomas and Bookwalter’s analysis

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<sup>332</sup>Robert D. Williams, “Criteria for Competence,” *Psychological Reports* 44 (1979): 184. Cited also by Spitzberg and Cupach., *ibid.*, p. 121.

<sup>333</sup>Spitzberg and Cupach, *ibid.*, p. 123.

<sup>334</sup>See critiques by Ivan Illich, “The Need for a Cultural Revolution,” *Risk*, 6:4 (1970): 37-38; Ivan Illich, *Deschooling Society*, (New York: Harper & Row, 1971); Paulo Freire, *Pedagogy of the Oppressed*, (New York: Herder and Herder, 1970); Charles E. Silberman, *Crisis in the Classroom* (New York: Random House, 1970); Robert James Havinghurst, *Developmental Tasks of Education*, 3rd ed. (New York: D. McKay Company, 1972); K.P Cross, *Accent on Learning: Improving Instruction and Reshaping the Curriculum*, (San Francisco: Jossey-Bass, 1976); Everett Reimer, *School is Dead: Alternatives in Education* (Garden City, NY: Doubleday and Co., Inc., 1971).

<sup>335</sup>Chris Argyris and David A. Schon, *Theory in Practice: Increasing Professional Effectiveness*, (San Francisco, CA: Jossey-Bass, Inc. Publishers, 1974).

<sup>336</sup>Spitzberg and Cupach, *idem.*, p. 130.

<sup>337</sup>*Ibid.*, pp. 139-140.

of the literature on context,<sup>338</sup> Spitzberg and Cupach propose 6 questions that enable one to analyze a context for strategic communication/interaction.

1. What culture is this and what are its characteristics? Useful measures for assessing cross-cultural contextual characteristics include Osgood, May, and Miron's Cross-Cultural Universals of Affective Meaning,<sup>339</sup> which contains affective measures of 620 concepts from 30 language/culture communities around the world; Geert Hofstede's Culture's Consequences<sup>340</sup> which studied differences in thinking and social action in 40 countries along the dimensions of Power Distance, Uncertainty Avoidance, Individualism, and Masculinity-Femininity; Harry Triandis' "Some Universals of Social Behavior"<sup>341</sup> which suggests a four dimension scale are all useful measures assessment of cross-cultural context's characteristics;<sup>342</sup> and Sherwood Lingenfelter's Transforming Culture, which uses the social factors of "grid" (the dimension of individuation) and "group" (the dimension of social incorporation) to analyze cultural context.<sup>343</sup>
2. What is the environmental setting? How does the environment (bright, gloomy, organized, etc.) affect the moods of pleasure, dominance, and arousal?
3. What kind of situation is this? (formal, intimate, casual, etc.)
4. How do I see myself in relationship to the people around me? What kind of roles and relationships are called for? (Cooperation or competition, formal/impersonal or informal/personal, intense or superficial, etc.)
5. What is the purpose of my communication?
6. Am I able to enact the appropriate behaviour? What skills are called for in this particular situation?<sup>344</sup>

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<sup>338</sup>M. Thomas and R. B. Bookwalter, Clarifying Context and Appropriateness in Communication Rules. Paper presented at the meeting of the Western Speech Communication Association, Denver, CO., 1982. Cited in Spitzberg and Cupach, *idem.*, pp. 144-148.

<sup>339</sup>Charles E. Osgood, William H. May and Murray S. Miron, Cross-cultural Universals of Affective Meaning, (Urbana, Illinois: University of Illinois Press, 1975).

<sup>340</sup>Geert Hofstede, Culture's Consequences, (Beverly Hills, CA: Sage Publications, Inc., 1984).

<sup>341</sup>Harry C. Triandis, "Some Universals of Social Behavior," Personality and Social Psychology Bulletin 4 (1978): 1-16.

<sup>342</sup>See Oliver C. S. Tzeng, "The Use of the Atlas of Affective Meanings in Intercultural Training," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. 1, Issues in Theory and Design (New York, NY: Pergamon Press, Inc., 1983), pp. 224-252.

<sup>343</sup>Sherwood Lingenfelter, Transforming Culture, (Grand Rapids, Michigan: Baker Book House, 1992). His approach is based on the framework suggested by Mary Douglas, "Cultural Bias," in In The Active Voice, (London: Routledge and Kegan Paul, 1982).

<sup>344</sup>"...the more motivated, knowledgeable, and skilled A is (or is perceived to be) and the more congruent A's communicative behavior is (or is perceived to be) with positively valenced evaluations, the more relationally competent A is (or is perceived to be) in the encounter being assessed." Spitzberg and Cupach, Interpersonal Communication Competence, p. 149.



Spitzberg and Cupach's model is integrative of many dimensions of relational and communication competency, identifying the competent individual as "motivated to communicate, knowledgeable about how to communicate, skilled in communicating, and sensitive to the expectations of the context in which the communication is to take place."<sup>345</sup>

### **Imahori and Lanagan's Model of Cross-Cultural Competence**

In a near reiteration of Spitzberg and Cupach, but drawing on intercultural communication research, Imahori and Lanagan base their model on four axioms of intercultural communication competence.<sup>346</sup> 1) *ICC competence is composed of motivation, knowledge, and skills dimensions.*<sup>347</sup> 2) *ICC competence is determined by measuring both individuals' competence in a specific relationship.* This is because of the interactive ("feedback") nature of communication. The greater the integration or convergence of communication behaviour between individuals the greater the perceived competence. 3) *ICC competence leads to effective relational outcome*, that is, "individuals in ideal intercultural relationships would exhibit characteristics of *close interpersonal relationships* such as intimacy, relational stability and commitment, high degree of interpersonal knowledge, and idiosyncratic rules."<sup>348</sup> 4) *ICC competence is both appropriateness and effectiveness,*

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<sup>345</sup>Ibid., p. 152.

<sup>346</sup>T. Todd Imahori and Mary L. Lanigan, "Relational Model of Intercultural Communication Competence," International Journal of Intercultural Relations 13 (1989): 269-276.

<sup>347</sup>The affective nature of cross-cultural communication (that is, the psychological interplay between interactants) was studied by William B. Gudykunst, Richard L. Wiseman and Mitchell Hammer, "Determinants of the Sojourner's Attitudinal Satisfaction: A Path Model," in Communication Yearbook I, Brent D. Ruben (ed.) (New Brunswick, NJ: Transaction, 1977), pp. 415-425.

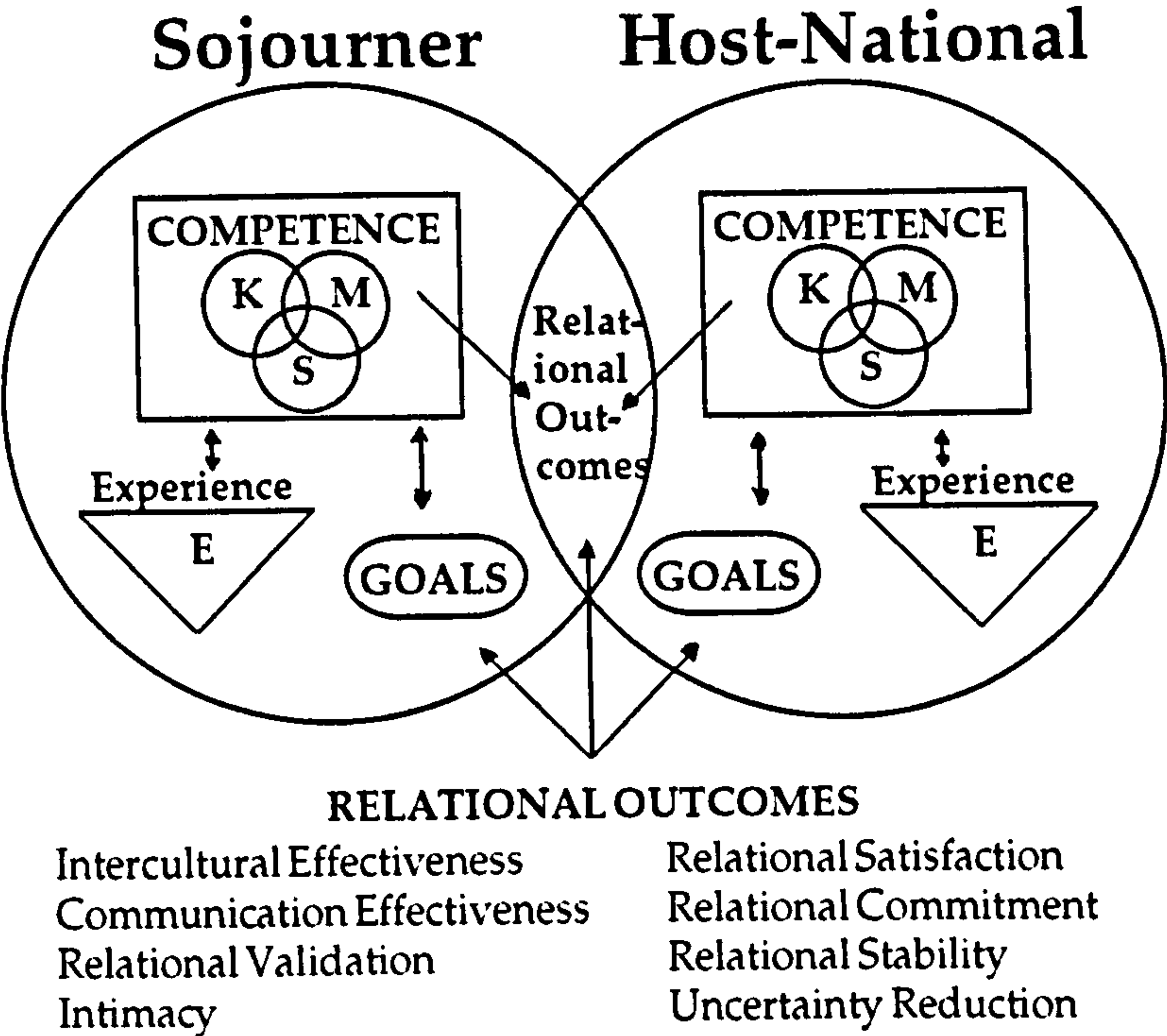
The cognitive aspect of intercultural communication was studied by Richard L. Wiseman, Mitchell R. Hammer and Hiroko Nishida, "Predictors of Intercultural Competence," International Journal of Intercultural Relations 13 (1989): 349-370.

The behavioural components of intercultural communication competence have been studied by Ruben utilizing his seven behavioural skills. Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," Group and Organization Studies 1 (1976): 334-354. Brent D. Ruben, "Guidelines for Cross-Cultural Communication Effectiveness," Group and Organization Studies 2 (1977): 470-479. Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 15-47. Other researchers have utilized and verified the utility of Ruben's seven behavioural skills for intercultural communication competence. cf. Margaret Olebe and Jolene Koester, "Exploring the Cross-cultural Equivalence of the Behavioral Assessment Scale for Intercultural Communication," International Journal of Intercultural Relations 13 (1989): 333-347. Mitchell R. Hammer, "The Effects of an Intercultural Communication Workshop on Participants' Intercultural Communication Competence: An Exploratory Study," Communication Quarterly 32 (1984): 252-262.

<sup>348</sup>Imahori and Lanigan, *idem.*, p. 275. This, obviously, is a point in interrelational competence that is critical to every missionary for effective ministry.

appropriateness referring to that which is “proper” and “right” and effectiveness referring to outcomes of accomplishment.<sup>349</sup>

FIGURE 9: Relational Model of Intercultural Communication Competence<sup>350</sup>



The model is based on the interaction of two individuals (a sojourner and a host-national), each of which brings to the communication context his or her own level of intercultural communication competence, experience, and goals. As identified in the axioms stated above, each individual’s ICC competence is composed of *knowledge* (the cognitive domain), *motivation* (from affective domain), and *skills* (the conative domain). *Knowledge* itself is composed of 1) appropriate knowledge of cultural interaction rules,<sup>351</sup> 2) culture general and culture specific knowledge,<sup>352</sup> and 3) linguistic knowledge. “*Motivation*,” the affective component, includes attitudes toward the culture (such as ethnocentrism, perceived social distance, open-mindedness, and positive regard to the culture) as well as attitudes and affective responses toward the other individual (such as anxiety, attraction, positive/negative stereotypes, etc.). Finally, the *skills* component is composed of many factors, including some

<sup>349</sup>Most intercultural communication research has focused on outcome. Only Collier has attempted to measure both appropriateness and competence in her research. Mary Jane Collier, “Culture and Gender: Effects of Assertive Behavior and Communication Competence,” in *Communication Yearbook 9*, Margaret L. McLaughlin (ed.) (Beverly Hills, CA: Sage Publishers, 1988), pp. 576-592.

<sup>350</sup>Imahori and Lanagan, *idem.*, p. 278.

<sup>351</sup>cf. Collier, *idem.*

<sup>352</sup>Richard L. Wiseman, Mitchell R. Hammer and Hiroko Nishida, “Predictors of Intercultural Competence,” *International Journal of Intercultural Relations* 13 (1989): 349-370.



if not all of Ruben's seven dimensions of behavioural competence (such as display of respect, positive interaction posture, empathy, and interaction management),<sup>353</sup> linguistic skills (knowledge and appropriate use of grammatical and syntactic rules, adequate and proper vocabulary, and proper vocalization skills--that is, proficiency in the host-culture language on the part of the sojourner, and ability to accommodate to the language proficiency-level of the sojourner on the part of the host-national), and affinity (interest, concern, friendliness) between the interactants.

The three components knowledge, motivation, and skills (identified as "K," "M," and "S" in the diagram) overlap because they are interdependent. These three components are influenced by the past experiences of the individual: if successful, these past experiences build confidence, willingness to engage in intercultural contact, knowledge of appropriate/inappropriate behaviours, and interactional skills; if unsuccessful, prior experience adds potentially self-defeating stress.

The goals of each interactant also influence the other components as they in turn affect goals. For example, if a person is conscious of being interculturally or communicationally incompetent, motivation will generally be affected negatively, as may also willingness to gain knowledge and skills through interaction. A highly competent individual is more likely to seek after and enjoy intercultural interaction than one who has actual or self-perceived low competence

Each interactant contributes to relational outcomes. Positive outcomes include intercultural effectiveness,<sup>354</sup> communication effectiveness,<sup>355</sup> relational satisfaction, and relational commitment. If each interactant's goals have to some extent been accomplished, the interactional outcome should be satisfying. To summarize the interrelationship of their model, Imahori and Lanigan suggested six theorems:

**Theorem 1: Knowledge, motivation, and/or skills dimensions of ICC competence independently or interdependently influence the relational outcome, one's goals, and/or one's experience.**

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<sup>353</sup>Ruben, "Assessing Communication Competency for Intercultural Adaptation," op cit. The other three dimensions are role behaviour flexibility, orientation to knowledge, and tolerance for ambiguity. While most follow-up studies on Ruben's seven behavioural skills have been verified, Hiroko Nishida's study found that six out of the seven measures did not predict Japanese students adjustment to the United States. Hiroko Nishida, "Japanese Intercultural Communication Competence and Cross-Cultural Adjustment," International Journal of Intercultural Relations 9 (1985): 247-269.

<sup>354</sup>Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 15-47.

<sup>355</sup>Jolene Koester and Margaret Olebe, "The Measurement of Intercultural Communication Effectiveness: An Extension of Ruben's Behavioral Assessment Scales," Conference: International and Intercultural Communication Division, Speech Communication Association Annual Meeting, (Chicago, Illinois: 1986), pp. 1-25.

Theorem 2: One's goal in a particular intercultural relationship influences his/her levels of ICC competence in one or more components.

Theorem 3: One's self-perception of ICC competence in one or more components influences the goal he/she sets within a relationship.

Theorem 4: Past intercultural experience influences one's level of ICC competence in one or more components.

Theorem 5: High level of ICC competence results in positive experience.

Theorem 6: Both dyadic members' competence, past experience, and goals influence the nature of relational outcome and vice versa.<sup>356</sup>

The authors have augmented components of Spitzberg and Cupach's model (except for the situational/contextual framework) by integrating it with a fairly broad body of empirical research on cross-cultural communication.

### **Heath's Transcultural View of Competence**

M. Brewster Smith's study of Peace Corps workers<sup>357</sup> and his subsequent research on competence<sup>358</sup> resulted in identification of traits that he felt were essential to cross-cultural competence: "self-confidence, self-esteem, assertiveness, self-reliance, self-control, boyancy, affiliativeness, realistic openness to experience, tolerance, principled responsibility, initiative, feelings of control over one's destiny, reality-orientation, control over impulses, clarity about identity, persistence in face of failure, determination, problem-solving attitude, strength of interests, risk of disapproval 'to master a task on one's own terms,' capacity to resist inner distraction, native and intrinsic curiosity, 'ability and disposition to make use of others' help on one's own terms' rather than just self sufficiency."<sup>359</sup> Douglas Heath, however, argued that these items demonstrate maturity rather than individual characteristics. Maturity he defines as unending "developmental dimensions" (i.e. one does not attain a point called maturity; one is always growing in maturity; it is a process<sup>360</sup>) which may be inferred from "the types and range of tasks, roles, and situations in which a person functions effectively." Competence in Heath's framework is a subset of maturity, referring to effectiveness in relating to some specific task which has to be evaluated by the requirements of that task.<sup>361</sup> Maturity determines generalized competence,<sup>362</sup> and the more complex the

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<sup>356</sup>Imahori and Lanagan, *idem.*, pp. 280-281.

<sup>357</sup>M. Brewster Smith, "Explorations in Competence: A Study of Peace Corps Teachers in Ghana," American Psychologist 21 (1966): 555-566.

<sup>358</sup>M. Brewster Smith, "Competence and Socialization," in Socialization and Society, John A. Clausen (ed.) (Boston, Mass.: Little, Brown, and Co., 1968), pp. 270-320.

<sup>359</sup>Listed in Douglas H. Heath, Maturity and Competence, (New York: Gardner Press, Inc., 1977), p. 34.

<sup>360</sup>*Ibid.*, p. 4.

<sup>361</sup>Heath, *ibid.*, p. 35.

<sup>362</sup>The difference can be inferred from the fact that immature adults can show competence in various realms of skills. For example, a person can be a competent carpenter and at the same time a self-centred, immature, and incompetent husband or father.



situations and demanding the roles and skills (as in cross-cultural ministry) the more critically important the role of maturity.

Heath's model arises from prior work on psychologically healthy individuals and integrates a broad body of research on successful adaptation and coping derived from empirical studies. The model has itself been tested successfully (with generally parallel results) in the eastern United States, Northern Italy, Sicily, Eastern Turkey, and Western Turkey on individuals selected by peers and other adults as exemplars of maturity and immaturity. The twenty dimensional combinations of maturity suggested in the model are interactions of psychosocial adaptive processes with personality variables.

The personality variables are categorized as 1) *cognitive skills*, 2) *self-concept*, 3) *values*, and 4) *personal relations*. The developmental dimensions of maturing are 1) *symbolization* (the use of language to form concepts; image production to represent reality, consequences of behaviour, ideals), 2) *allocentrism* ('the ability to take a multiplicity of perspectives'<sup>363</sup>), 3) *integration* (growing coherence and integration; 'internal logic or order among the person's values, temperamental and personality traits, self-concept, motives, and controls'), 4) *stability* and 5) *autonomy* (which together provide stable structures as a 'basis for autonomous self-regulation.').<sup>364</sup>

FIGURE 10: Heath's Model of Maturity and Competence<sup>365</sup>

PERSONALITY	DIMENSIONS OF MATURING				
	Symbolization	Allocentrism	Integration	Stability	Autonomy
Cognitive Skills					
Self-concept					
Values					
Personal Relations					

**Symbolization:** The cognitively mature individual is “able to make more discriminations” and to reflect on his own thought patterns and memories. He has accurate self-insight and recognizes personal strengths and weaknesses and is more aware of his motives and values foundational to his life. He is also sensitive to “limitations, interests, possibilities, and anxieties” of other people, responding to their actions and reactions consciously and reflectively.

**Allocentrism:** A mature individual has increasing capacity to “make realistic judgements, test reality appropriately, and think objectively” as well as to think through

<sup>363</sup>This is related to cognitive complexity.

<sup>364</sup>Ibid., pp. 6-21.

<sup>365</sup>Ibid., p. 6.

alternative possibilities to a problem or task. He is able to take a “multiplicity of perspectives” toward situations, problems, issues in order to find the best way of doing things, solutions, and responses. He is able to see how others see him, to objectify understanding of self, to have positive and balanced self-regard. He is able to identify with other people, to empathize, to feel with them in their joys, hurts, sorrows, and needs. He is able to see diverse viewpoints, to become tolerant and respectful. He does not lose sight of his own values but he becomes less authoritarian. He develops responsibility to and care for others as well as warmth, compassion, dependability, and reliability as a result of deepened interest in others.

***Integration:*** A maturing individual develops increased coherence and integration along with differentiation and greater complexity. Integration refers to “internal logic or order among the person’s values, temperamental and personality traits, self-concept, motives, and controls.” Mental capacities become more complex; elements of problems can be identified, articulated, and related to more complex, hierarchical modes of problem solving. They are not side-tracked with “emotionalized material.” There is correspondence between his ideal values and life patterns, between the ideal self and the private. There is more realism, planning, and coordination of life. A workable philosophy of life has been developed; there is greater consistency in conscious value orientations. Social relationships develop interpersonal trust, love, mutuality, openness, and intimate with a greater range of people.

***Stability and Autonomy:*** The mature individual, as a result of many adaptations in life, has developed stable habits, skills, and values (the “warp and woof of character and personality”) which are resistant to change but resilient in the midst of pressures and at times of disorganization, allowing for adaptation to a wide range of situations. This demands that the individual be able to analyze situations, synthesize information, form logical perspectives, and make realistic and creative judgements. He must be able to resist or rebound from emotions in threatening situations. Mature individuals have been found to be more field-independent and therefore able to cognitively resist external influences. They tend to have a stronger sense of self-identity, societal and familial role that is personally integrative, and stable self-concept. They are able to “sacrifice self-interests in behalf of a conviction” because their values are enduring and provide purpose and direction in the face of difficulties and opposition. They are able to master their impulses. Their relationships with others tend to be stable. They tend to have more stable marriages and friendships.<sup>366</sup>

The difference between competence and maturity is an important distinction and a critical addition to the discussion on competence because it engenders a systemic and

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<sup>366</sup>Ibid., pp. 8-21



wholistic approach to training and selection for cross-cultural. It forces selection to go beyond the simplistic approaches of trait analysis, searching for pathological symptoms, and identifying set skills to considering the individual as a whole in the demonstrations of maturity in all facets of life. As Heath stated it,

A person is a constantly changing, open, organized system dependent both on his means of adaptation to others and on the environment for his fulfilment and survival. Because of psychology's powerful reductionistic bias, we ignore the organizing *systemic* properties of the person in most personality research. We break up the system into components whose development we study, usually in isolation from their relations to each other and to the functioning of the total system.

M.B. Smith found that psychiatric judgements of the potential effectiveness of Peace Corps candidates did not predict their actual effectiveness in the field. The psychiatrists ferreted out pathology in the volunteers, but failed to identify strengths that altered the significance of specific symptoms for each person (1966). Haan's study of ego functioning showed that MMPI indicators of defensiveness did not predict effectiveness unless complemented by measures of coping skills (1965). Allport has consistently and rightly insisted that we keep the person always in view (1964). It is a person's systemic organization that is the touchstone for understanding the meaning of his specific traits and "symptoms."<sup>367</sup>

This model could also engender greater breadth in the training process. Most models on which training is based, according to Dinges, "treat adaptative processes in intercultural situations as distinct, separate, and developmentally unrelated to the rest of the sojourner's lifespan."<sup>368</sup>

### **Hawes and Kealey's Model**

Hawes and Kealey's research examined adaptation and effectiveness of 250 Canadian "cooperants" (technical assistants) world-wide, utilizing self-report forms and valuations of these individuals by 90 nationals (in Asia, East Africa, West Africa, and Latin America). Results on which their model of intercultural effectiveness is based were derived from content analysis of comments and computer analysis of categorical data. Canadians identified five factors related to success: *professional competence, intercultural interaction, personal/family adjustment, social adaptation, and environmental adaptation*. Nationals identified two factors: *intercultural/professional interaction and training, and personal/family adjustment*.<sup>369</sup>

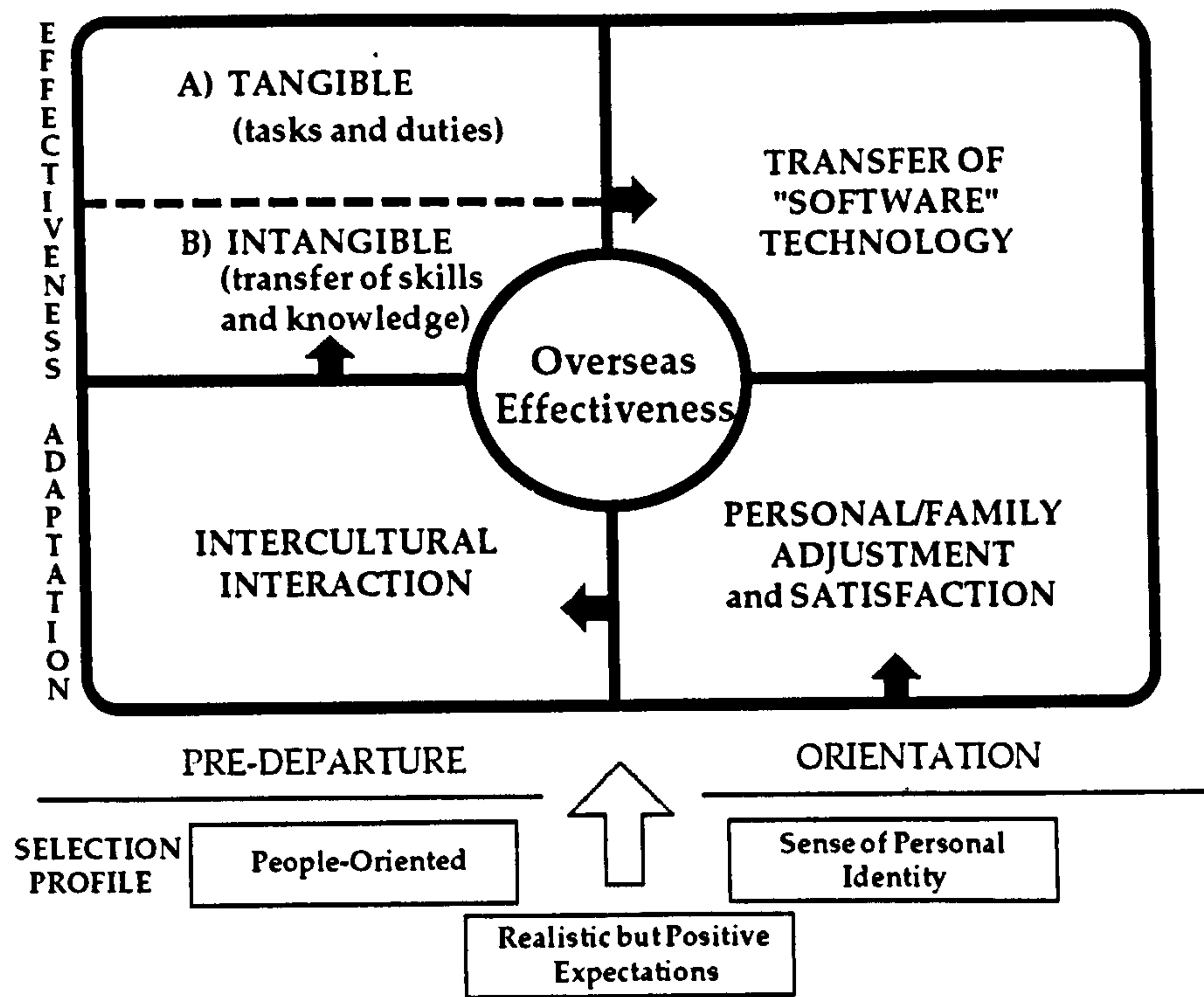
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<sup>367</sup>Ibid., p. 22.

<sup>368</sup>Norman Dinges, "Intercultural Competence," in Handbook of Intercultural Training, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, Vol. 1, Issues in Theory and Design (New York, NY: Pergamon Press, Inc., 1983), p. 193.

<sup>369</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment (Ottawa, Canada: Canadian International Development Agency, 1979), p. 154.

FIGURE 11: Profile of Effective Cross-Cultural Work: A Flow Model<sup>370</sup>



*Intercultural interaction and training* was the factor mentioned by all parties, its indicators including: interaction with nationals socially and on the job, interest in and knowledge of the local language, knowledge of local non-verbal modes of communication, factual knowledge about the local culture, concern with and training of nationals, tolerance and openness toward local culture and conditions, and local mentality and customs, as well as attitudes of collaboration and cooperation with nationals. Hawes and Kealey's findings indicated that nationals considered intercultural interaction as the essence of overseas effectiveness among foreign expatriates.<sup>371</sup>

*Professional competence* is the possession of technical knowledge and skill and the capacity to use it daily in responsibilities on the overseas job. It is indicated by: technical knowledge and background, demonstrated commitment to the job, understanding of local technical conditions and ways of operating. The indicators of *personal/family adjustment and satisfaction* are: engaging in enjoyable activities with nationals, satisfaction with environment and living and working conditions, minimum of complaints about culture, nationals, or

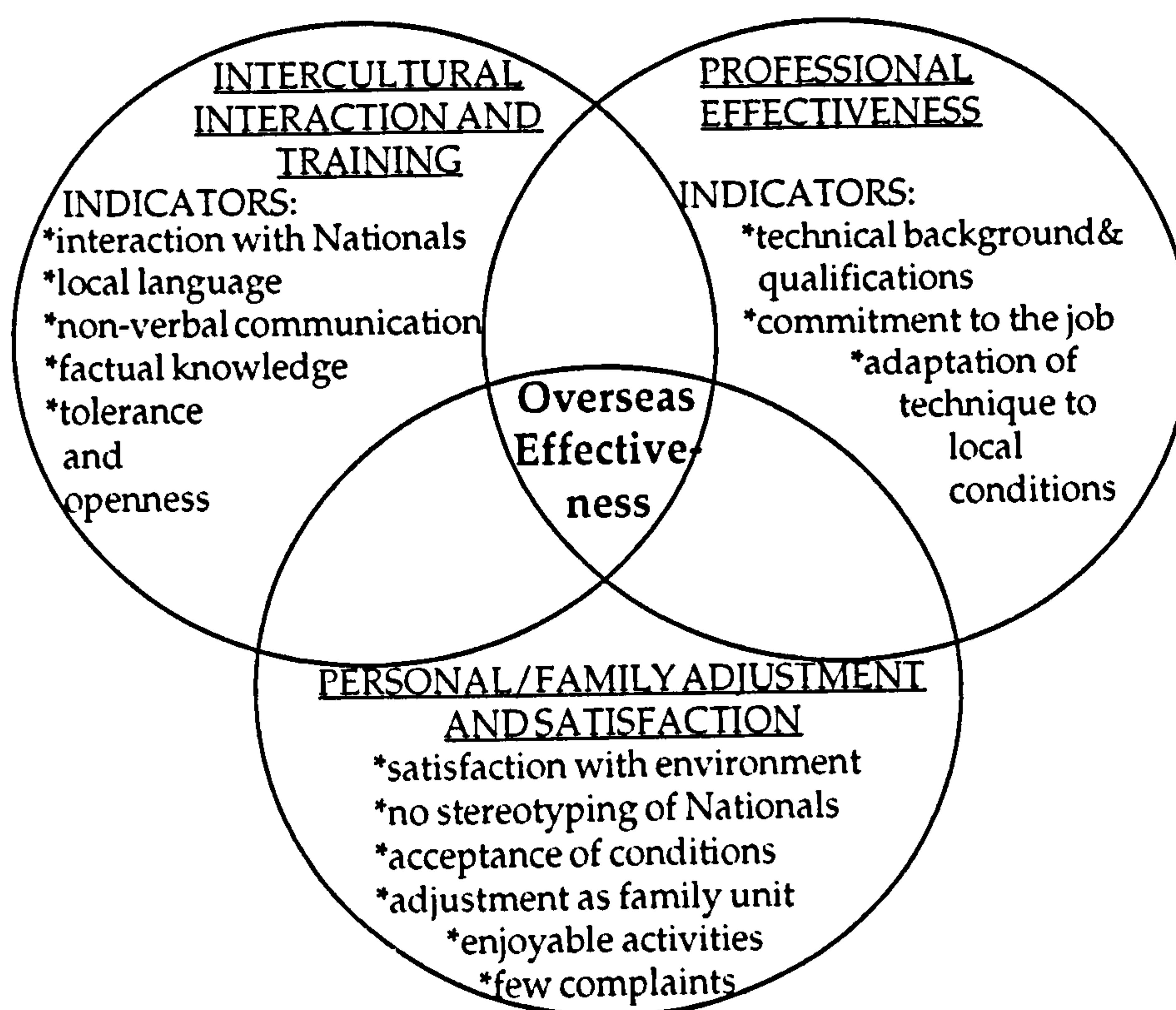
<sup>370</sup>From figure entitled "The Dynamics of Effective Transfer" in Frank Hawes and Daniel J. Kealey, "An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment," *idem.*, p. 252.

<sup>371</sup>*Ibid.*, p. 159.



conditions, lack of stereotyping of nationals or “home, and adjustment as a family unit (that is, the capacity to cope well with the frustrations and problems encountered). If these three factors are placed as three circles in a Venn diagram, the overlap is the “overseas effectiveness” component.

**FIGURE 12: The Concept of Overseas Effectiveness, Venn Diagram<sup>372</sup>**



Pre-departure selection must profile an individual as *people-oriented*.<sup>373</sup> His interpersonal skills must include: flexibility (“flexible response to ideas, beliefs or points of view of others;” openness), respect (responsiveness to others in such a way that they feel valued; attentiveness and concern), capacity to listen (accurately perceiving the needs and feelings of others), ability to build and maintain relationships (trusting, friendly, and cooperative), control (calm when confronted by interpersonal conflict or stress), and sensitivity to local realities (political, social, religious, and cultural).<sup>374</sup> There must also be a *realistic sense of self-identity*, which would include the recognition of one’s own interpersonal skills (as listed above) as well as the ability to be frank and outspoken, direct in dealings with others,<sup>375</sup> ability to take the initiative, and willingness to take risks. Then, there must be *realistic but*

<sup>372</sup>Ibid., p. 164.

<sup>373</sup>Frank Hawes and Daniel J. Kealey, “An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment,” *International Journal of Intercultural Relations* 5 (1981): 251.

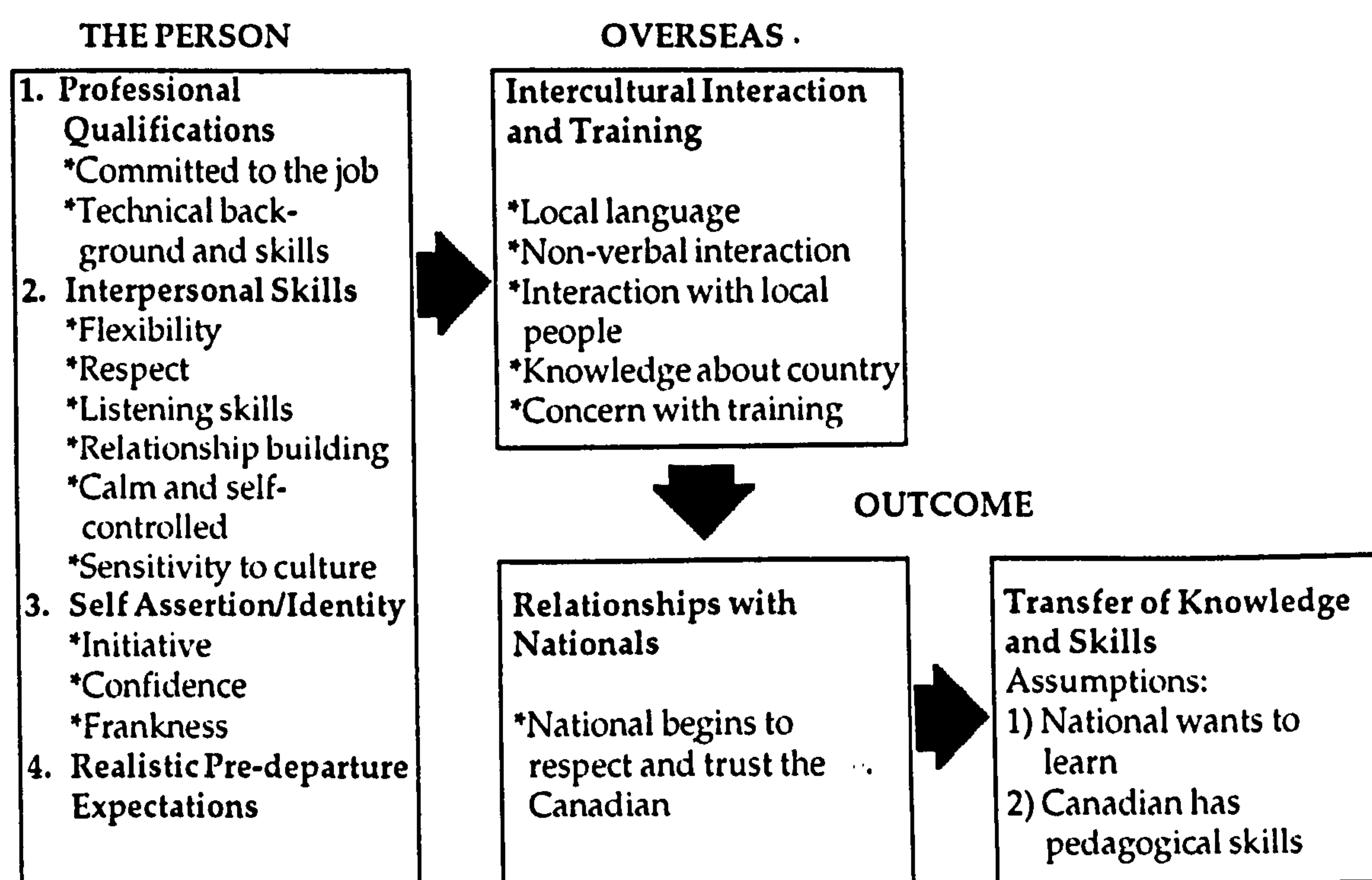
<sup>374</sup>Ibid., p. 167.

<sup>375</sup>The extent to which this could be taken would of course have to be culturally determined. Japan and west Africa would be very different in this regard.

*positive pre-departure expectations.* These would include recognitions of problems to be faced but fair optimism about one's success in taking them on and the expectation of a rewarding experience.

On-field adaptation processes include personal and family adjustment and the beginnings of intercultural interaction. As relationships with nationals develop, effectiveness as one's task is also likely to grow both with tangible tasks and duties as well as the more intangible transfer of one's knowledge to nationals.

**FIGURE 13: The Dynamics of Effective Transfer: A Model<sup>376</sup>**



While Hawes and Kealey's model does not add a great deal of new information, it does give empirical validation to theoretical (and intuitive) formulations and models previously developed. More importantly, Hawes and Kealey have wrestled with issues of transfer of one's knowledge and skills cross-culturally, which has not been done empirically prior to this study, and in that respect, their research has deep significance for missionaries whose primary purposes for being in another culture are to transfer knowledge and skills to nationals. Whether it be through evangelism and church development, education, training national church leadership, music ministries, camp work, community development, medical or other technical services, all have "transfer of 'technology'" at heart. The most significant

<sup>376</sup>Ibid., p. 181.



finding of their study was that the extent to which transfer occurred was directly proportional to the time and effort of cultivating national friendships away from the “technical context” (classroom, shop, etc.).<sup>377</sup>

### **Summary**

This chapter has laid a foundation for the empirical study to come by surveying the literature on competence for theoretical formulations of cross-cultural effectiveness in the areas of culture adjustment and adaptation, acculturation, interpersonal interaction, communication, social learning processes, and ministry skills. Issues related to trait-based and context-based interactional competence were also considered. Finally models of intercultural competence were presented. Chapter Three will now look at selected empirical research on intercultural competence.

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<sup>377</sup>Ibid., pp. 254-256.

## CHAPTER THREE

### SELECTED EMPIRICAL RESEARCH ON INTERCULTURAL COMPETENCE

#### Introduction

When the Peace Corps was launched in 1961 and thousands of young men and women volunteered for service overseas, there was sudden demand for accurate selection methodology.<sup>1</sup> As a consequence, early studies into the nature of cross-cultural experiences (such as acculturation,<sup>2</sup> non-verbal communication,<sup>3</sup> and culture shock<sup>4</sup>) gave way to research on the *predictive validity* of standardized psychological tests for cross-cultural adjustment.<sup>5</sup> However, by the early '70's it began to be obvious that standardized tests were

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<sup>1</sup>The need for effective training philosophy and procedure was not as immediately apparent. It was assumed that the universities would do an adequate job. See the history of this and the changes that took place in Roger Harrison and Richard L. Hopkins, "The Design of Cross-Cultural Training: An Alternative to the University Model," The Journal of Applied Behavioral Science 3 (1967): 431 - 457.

<sup>2</sup>H. G. Barnett, et al., "Acculturation: An Exploratory Formulation," American Anthropologist 56 (1954): 973 - 1002. Leonard Broom and John I. Kitsuse, "The Validation of Acculturation: A Condition to Ethnic Assimilation," American Anthropologist 57 (1955): 44 - 48. A. Irving Hallowell, "Sociopsychological Aspects of Acculturation," in The Service of Man in the World Crisis, Ralph Linton (ed.) (New York: Columbia University Press, 1945), pp. 171 - 200. A. Irving Hollowell, "Sociopsychological Aspects of Acculturation," in The Service of Man in the World Crisis, Ralph Linton (ed.) (New York: Columbia University Press, 1945), pp. 171-200. Ralph Linton, Acculturation in Seven American Indian Tribes, (New York: Appleton-Century, 1940). Robert Redfield, Ralph Linton and Melville J. Herskovits, "Memorandum for the Study of Acculturation," American Anthropologist 38 (1936): 149 - 152.

<sup>3</sup>Edward T. Hall, The Silent Language, (New York: Fawcett, 1959).

<sup>4</sup>K. Oberg, "Cultural Shock: Adjustment to new cultural environments," Cultural Anthropology 7 (1960): 177-182.

<sup>5</sup>For an overview of these research efforts see J. W. Cotton, "Par for the Corps: A Review of the Literature on Selection, Training, and Performance of Peace Corps Volunteers," ERIC: ED 110672, 1975; Michael Brein and Kenneth H. David, "Intercultural Communication and the Adjustment of the Sojourner," Psychological Bulletin 76 (1971): 215 - 230; and Michael F. Tucker, Screening and Selection for Overseas Assignment: Assessment and Recommendations to the U.S. Navy (Denver, Colorado: The Center for Research and Education, 1974), pp. 1-108. Some early examples of these studies include: Walter Mischel, "Predicting the Success of Peace Corps Volunteers in Nigeria," Journal of Personality and Social Psychology 1 (1965): 510 - 517. Charles Dicken, "Predicting the Success of Peace Corps Community Development Workers," Journal of Consulting and Clinical Psychology 33 (1969): 597-606. Michael J. Uhes and John Shybut, "Personal Orientation Inventory as an Predictor of Success in Peace Corps Training," Journal of Applied Psychology 55 (1971): 498-499.



not adequately predictive, nor was research which had attempted to identify the relationship of language proficiency to job competence, traits to intercultural effectiveness, and total person assessments to intercultural competence resulted in improved selection procedures and training processes.<sup>6</sup>

As Benson's review of research efforts from 1973 to 1977 shows, research then turned to new systematic efforts to develop *criteria measures*, with the result that higher correlation between predictor and criterion measures occurred.<sup>7</sup> Studies since 1977 have benefited from these previous research efforts, and as a result have become more sophisticated in theoretical conceptualization, development of variables,<sup>8</sup> and analysis of results.<sup>9</sup> Rather than attempt to review all of these studies in depth, this chapter will limit the review of empirical studies on intercultural effectiveness and competence to the few which specifically developed the finding of criteria, the formulation of research instruments, and development of research designs which influenced this study.

### Jessie Harris, 1973

Harris was one of the first to systematically attempt to develop criteria measures of overseas effectiveness.<sup>10</sup> He conducted one to two-hour open interviews on the nature and dimensions of effectiveness with a sample of 53 Peace Corps Volunteers (PCVs) as well as with Peace Corps staff and Tongan staff members who were responsible for coordinating field placements and supervision. On the basis of that data he developed field rating forms for educational specialists who used them to observe the behaviours of the sample. The rating form consisted of 32 items along three lines--performance, interpersonal interaction, and

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<sup>6</sup>See the analysis of nine of these studies by Kenneth H. David, "Intercultural Adjustment and Applications of Reinforcement Theory to Problems of 'Culture Shock'," Trends 4 (1972): 1 - 64.

<sup>7</sup>Philip G. Benson, "Measuring Cross-cultural Adjustment: The Problem of Criteria," International Journal of Intercultural Relations 2 (1978): 21 - 37. The most significant studies that he reviewed included: Jesse G. Harris Jr., "A Science of the South Pacific: Analysis of the Character Structure of the Peace Corps Volunteer," American Psychologist 28 (1973): 232-247. Ted M. I. Yellen and Sandra J. Mumford, The Cross-Cultural Interaction Inventory: Development of Overseas Criterion Measures and Items that Differentiate between Successful and Unsuccessful Adjusters ((San Diego, CA: Navy Personnel Research and Development Center, U.S. Navy Personnel Research and Development Center, San Diego, California 92152, 1975), pp. 1-67. Michael F. Tucker and J. E. Schiller, "Overview Summary for an Assessment of the Screening Problem for Overseas Assignment," (Denver, Colorado: Center for Research and Education, 1975).

<sup>8</sup>Spitzberg argues that this is not the case; that conceptual inbreeding and scholarly seclusion is particularly problematic in the intercultural literature, and that variables are often "derived from a priori conceptions of the authors rather than empirically validated components." Brian H. Spitzberg, "Issues in the Development of a Theory of Interpersonal Competence in the Intercultural Context," International Journal of Intercultural Relations 13 (1989): 242-243.

<sup>9</sup>Norman Dinges, "Intercultural Competence," in Handbook of Intercultural Training, Vol. 1 - Issues in Theory and Design, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, (New York: Pergamon Press, Inc., 1983), p. 196.

<sup>10</sup>Jesse G. Harris Jr., "A Science of the South Pacific: Analysis of the Character Structure of the Peace Corps Volunteer," American Psychologist 28 (1973): 232-247.

personal characteristics. One subcategory related to emotional maturity was included. Each item had a descriptor which was fully defined on the form. Some items employed 5-point scales, some 3 point scales, some utilized frequency points, and the category of interpersonal relations was reduced to “presence” or “absence” of attributes. Interpersonal behaviours were also relegated to interactions with 1) Peace Corps staff, 2) host country supervisors, 3) host country subordinates, and 4) host country associates. Each subject was rated by three Peace Corps, one of which was a current staff member and another who was a former staff member on Tonga but who had been away for at least two months.

The provisional measure of success determined was simple. Premature returnees were assumed to be unsuccessful (n=12) and all others were assumed successful (n=40). The ratings of the subjects were analyzed to determine 1) the distribution around the mean, 2) inter-rater reliability, and 3) item-by-item inter-rater reliability. The mean ratings for three raters of all success cases from the two programs (n=40) and from early terminees (n=12) were subjected to nonstepwise discriminant analysis using only the 24 items which had met the item-by-item reliability criteria. An overall discriminant analysis examined the extent to which the two groups could be differentiated. Lest raters’ knowledge of the successful and early terminee subjects could have caused halo effects, nonstepwise discriminant analysis was again performed on high-success vs. low-success subgroups, high-success groups vs. premature returnees, and low-success vs. premature returnees. The 24 items were then factor analysed and a percentage of variance calculated for the derived factors.

Inter-rater reliability was considered acceptable, considering the isolation of raters from each other and the behavioural nature of the items, determined by the average correlation coefficient, with most exceeding .60. The 24 item criterion scale had an appropriate distribution of 3.04 (SD=1.11) around the mean of the 5-point scale. Analysis revealed that all 24 variables distinguished between the successful and the returnee groups ( $p<.0002$ ), and that the potential halo effect was eliminated since the items also distinguished between the high success (n=22) and low success (n=18) groups ( $p<.001$ ).

Eleven items distinguished between the two groups: 1) perseverance, 2) patience and tolerance, 3) courtesy,<sup>11</sup> 4) interest in nationals, 5) reliability, 6) knowledge of subject, 7) adaptability, 8) realism of goals, 9) facility with language,<sup>12</sup> 10) inner strengths, and 11) agreement and compromise.<sup>13</sup> Principal axis factor analysis with normalized varimax rotations on these items resulted in four factors: 1) strength of personality/character (29.2%),

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<sup>11</sup>Items one to three alone achieved an accuracy of classification of 94% on differentiating success from early terminee groups.

<sup>12</sup>Numbers 6-9 achieved an accuracy of 97.5% in separating high-success from low-success groups.

<sup>13</sup>A third comparison using numbers 1-6 achieved almost 100% accuracy of classification.



2) general competence as a teacher (24.5%), 3) cultural interaction (22.7%), and facility in interpersonal relations (20.0%).

Harris had two very significant conclusions in his study. First, he questioned the evaluation of technical performance alone as adequate to describe or to predict competence (“total performance”) and adaptation on the field.<sup>14</sup> Secondly, he emphasised the role that personal qualities and traits of character play in defining success:

Deeper-lying personal qualities, conventionally described as traits of character... constitute the single most important category of variables which distinguish successful Volunteers from early terminees in the field and are at least as important, perhaps more important, than performance variables in distinguishing the more effective Volunteers from the less effective Volunteers who actually remain on the field for two years.<sup>15</sup>

The major problem methodologically was the use of factor analysis and multiple discriminant analysis on such a small sample size. Corroborating self-report criteria data should have augmented the study also. However, Harris made an important contribution in differentiating between technical performance, intercultural interaction, and interpersonal skills as distinct criteria in defining success.

#### Kennedy and Dreger, 1974

Kenney and Dreger’s research among missionaries<sup>16</sup> is one of the few published empirical studies done on-field on the missionary population to determine criteria measures of effectiveness. Two instruments were prepared, a specifically prepared descriptive 5-point scale check list, the Missionary in Action (MINA) and the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B), a standardized measure of interpersonal relationship. Items for the MINA were developed from descriptors (behaviour characteristics relevant to missionary experience at an “ideal description” of the top 10% to 20% of their missionaries) provided by foreign and home office personnel secretaries from six missions. The median of the profiles provided by these six missions became the standard profile for the test. The authors had the MINA translated into Tagalog where it was field-tested prior to this study.

The sample included 137 missionaries who self-scored on the instruments and 420 missionary colleagues who also rated the missionaries on the MINA and FIRO-B. Ratings were also obtained from personnel staff or regional secretaries for 112 of the missionaries. Comparison was made between self-scores and colleague-related scores and between self-scores and the standard profile scores on both the MINA and the FIRO-B using Cattell’s

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<sup>14</sup>Ibid., p. 243.

<sup>15</sup>Ibid.

<sup>16</sup>While the structure and content of Kennedy and Dreger’s study had very little influence on the development of this study on missionary competence, it is being included here because it is one of the few empirical studies that has been done on missionary effectiveness.

coefficient of pattern similarity. Scores from all respondents (the total sample of 567--missionaries and their colleagues) were inter-correlated and the matrix factor analyzed, producing eleven factors. Reliability coefficients were determined for each of the eleven factors. All factors were then subjected to Pearson Product-Moment correlations between the median z-scores for each missionary and the supervisory ratings from at least three administrators in the home office of each missionary. Highest mean and median  $r_p$  coefficients were produced by the correlation of self- and colleague-scores on the MINA (median of .40 and mean of .28), followed by the self-rated and standard score of the FIRO-B (median=.21; mean=.27).

The eleven factors identified the most effective missionaries as those with the following characteristics: those who are 1) understanding and accepting of people and ideas, 2) sensitive to people and events (though the measure stated it negatively), 3) organized in professional responsibilities, 4) flexible, 5) sought by other people, 6) leaders, 7) committed to Christ, 8) able to fit in and at ease interpersonally, 9) adjusted to cultural demands, 10) observant of people's special needs, and 11) having positive personal family relationships.<sup>17</sup> As criterion descriptors these are helpful, more because they fit the three dimensions--personality traits, interpersonal skills, and professional abilities--which had been and were to be generally verified by other empirical studies, than because of the breadth of the criteria identified. While the sample was large and there was a sufficiently large group (field and home missionaries) involved in developing the instrument, the standard profile for the test was determined by only six individuals from each of the missions! The weakness here is that home staff perceptions of criteria standards might differ considerably from field staff perceptions.

While there has been no apparent follow-through to build on this research, Kennedy and Dreger felt that the development of the MINA check list was helpful, not only because of the high level of reliability demonstrated by the coefficients between the self- and colleague-rated instruments, but because the MINA demonstrated concepts relevant to the missionary enterprise which were not apparent in the FIRO-B. The use of missionary-colleagues to rate the subjects was an important empirical method and carried through into the present study.

### Michael Tucker and CRE '73

Michael Tucker, a trainer with the Peace Corps and for several years the director of the Puerto Rico Peace Corps Training Center, observed that there were many instances of trainees working successfully through pre-field and on-field training exercises but not making much progress in cultural adaptation, while inversely, there were trainees who adjusted

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<sup>17</sup>Patty Weaver Kennedy and Ralph Mason Dreger, "Development of Criterion Measures of Overseas Missionary Performance," *Journal of Applied Psychology* 59 (1974): 69 - 73.



rapidly and well without apparent need of training. This raised the question of criteria of adaptation, and the need for empirical field-based research to provide both the operational definitions from which training strategies could be revised and the effectiveness measurements for adjusting training design. It was assumed that cross-cultural adaptation had cognitive, affective, and behavioural dimensions which interact to enable effective intercultural functioning. It was also assumed that the insights gained and methods used would be applicable to anyone faced with personal adjustment to a new environment anywhere.<sup>18</sup>

To tap the cognitive, affective, and behavioural dimensions, seven instruments and procedures were developed.<sup>19</sup> These included 1) a *Gestures Test* to assess recognition of the meaning of fifteen common Brazilian non-verbal signs, 2) a *Factual Information Test* to determine the extent of the subject's acquired knowledge of Brazilian history, geography, arts, social science, and contemporary affairs, 3) a *Verbal Semantic Differential* to measure the subject's affective response pattern to Brazil-specific stimuli, 4) a *Photographic Semantic Differential* to obtain a second measurement of emotional responses to visual stimuli of Brazilian life and culture, 5) an *Activities List* to measure the reinforcing value of common activities and the extent to which individuals engage in these activities, 6) a *Volunteer Interview* to obtain additional information on individual behaviour, affective states, and cognitions with reference to Brazilian environment, and 7) a *Cultural Dimensions Test* to measure the cognitive understanding of the differences between Brazilian and North American cultures.

The sample included four groups of participants. One group of 43 consisted of adapted (33) and non-adapted (10) Peace Corps Volunteers serving in Brazil who were nominated through a five-step process: 1) by Peace Corps Directors from each of the Brazilian states where the study was undertaken, 2) by peers (both PCVs and Brazilian co-workers), 3) by potential subjects screened from a matrix of all nominations, 4) through high reliability nominations verified by Brazilian co-workers of nominees, and 5) by self nomination as adapted to the culture. The other two groups existed for instrument corroboration and rating reliability. One was composed of 72 Americans living in Colorado who were identified as "naive" in regard to Brazil. The other was comprised of 18 Brazilians living in the state of Minas Gerais who were demographically matched to Peace Corps

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<sup>18</sup>Michael F. Tucker, "CRE Studies of Peace Corps Training in Brazil," P. C. Program and Training Journal 1 (1973): 7.

<sup>19</sup>See Michael F. Tucker, et al., Improving Cross-cultural Training and Measurement of Cross-cultural Learning (Vol. 1 of the report of supplemental activities conducted under ACTION Contract PC-72-42043, Denver, CO: Center for Research and Education, 1973). Available now through the ERIC System.

Volunteers. Each of the four groups was reduced to 10 subjects. Using the non-adapted Volunteers as a control group, each of the members of the other groups was demographically matched with the members of the control group on the basis of marital status, age, sex, urban or rural background, and educational level. Fisher's t-test was used with unmatched groups of equal size to evaluate correlations due to discrepancies in marital status.

Data was collected by five trained teams of two each (one Brazilian and one American on each team), organized, and analyzed by hand in both Brazil and Colorado. It was then subjected to Two-Group Analysis. The *Gestures Test* significantly discriminated between the adapted and the non-adapted groups. The *Factual Information Test* significantly discriminated between all four groups, with "naive Americans" scoring the least, non-adapted Volunteers scoring twice as high as the naive Americans, adapted Volunteers scoring three times as high, and Brazilians scoring four times as high as the naive Americans. The most discriminating scales between adapted and non-adapted in the *Verbal Semantic Differential* were "potency" and "evaluation," while the *Activities List* had the following scales as the most significant discriminators: 1) Interpersonal vs. Noninterpersonal Activities, 2) Brazil-related vs. Non-Brazil-related Activities, 3) Frequency of specific activities, and 4) number of activities adapted Volunteers liked. While the *Volunteer Interview* yielded differences between the two groups it could not be analyzed by matched group procedures, nor did the *Cultural Dimensions Test* or the *Questionnaire on Nationality Clues* significantly discriminate between the adapted and non-adapted groups.

These last two tests provided the most surprising finding, that is, that on cognitive tasks dealing with cultural similarities and differences there was not a lot of difference between adapted and non-adapted Volunteers, bringing into question training techniques based strictly on cognitive understanding of cultural dimensions.<sup>20</sup> Again, as with the Harris study, the character/personality traits as well as behavioural interaction seem to be of considerable significance. The study found a pattern among adapted Volunteers of very active involvement in the culture and with people. Personally satisfying activities learned in the States were continued in Brazil but even more activities (which tended to be interpersonal in nature and Brazilian in character) were encountered, learned, and engaged in in Brazil. In fact, adapted Volunteers tended not to enjoy as much or to participate in activities that were

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<sup>20</sup>The importance of "approach behaviour" and active interpersonal interaction was such a critical finding that in terms of training Tucker wrote, "The primary focus on training can no longer be on cognitive understanding of cultural dimensions, concepts, similarities, and differences learned in small group exercises no matter how 'experiential' they appear in design. We believe training must focus much more on facilitating the individual, human process of learning to live and work effectively in a foreign culture by encouraging individual involvement in activities that elicit desired emotions and behaviors and supporting such involvement through guidance and counseling." Tucker, "CRE Studies..." *idem.*, p. 9.



non-Brazilian as the non-adapted Volunteers (ie. reading English books, listening to American music, eating alone, disparaging Brazil to other Americans, etc.).

Higher levels of informal interpersonal interaction tended also to result in greater skill in non-verbal communication. Adapted Volunteers were found to be more knowledgeable of and proficient in the use of hand gestures and signs which are so distinctive a feature of the paralinguistic communicational patterns in Brazil. Adapted Volunteers also tended to enjoy engaging in *batepapo*, long informal conversations, discussing serious subjects with Brazilians, and reading Brazilian newspapers and magazines, and as a consequence had acquired a greater breadth of personally and situationally acquired items of factual knowledge about Brazil which aided in conversation. There were some Brazilian activities which few Volunteers enjoyed or engaged in, and they were troubled by such things as lack of intellectual stimulation, poverty, and climate, but they overcame these feelings usually through their interpersonal relationships with Brazilians. "In general, they move toward the culture in which they are living, learning from and with host Brazilians, and acquiring positive feelings, for the values Brazilians hold and for the way Brazilians do things."<sup>21</sup>

Out of this research a "Profile of Intercultural Adjustment" was developed that contained the following descriptors: 1) *acceptance of the foreign culture*, "the ability to not criticize, make fun of, or "put down" foreign customs and behaviour patterns but to accept them as different from one's own and as valid for the people of the foreign country," 2) *positive emotional response*, "the affective experiencing of good, positive feelings about the foreign country, particularly people-to-people relationships," 3) *transfer of reinforcing activities from one's own culture*, "the effective transfer of appropriate personal and family activities from the home environment to that of the foreign culture," 4) *participation of reinforcing activities of the foreign culture*, "the ability to engage in appropriate personal and family activities that are characteristic of the foreign culture,"<sup>22</sup> 5) *avoidance of offensive mannerisms of own culture*, "the ability to do some of the things that foreigners like about North Americans, and to avoid doing some of those things that are annoying to them," 6) *knowledge of factual information*, "the learning of enough historical and contemporary information about the foreign country to engage in conversation without appearing ignorant or not interested, and to pursue interests in the foreign country which support individual and family lifestyles," 7) *language ability*, "the ability to speak and understand foreign words and phrases, sufficient to meet individual needs in the foreign country," and 8) *non-verbal com-*

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<sup>21</sup>Tucker, Ibid., p. 8.

<sup>22</sup>For further discussion on reinforcement theory as it pertains to intercultural adjustment see Kenneth H. David, "Intercultural Adjustment and Applications of Reinforcement Theory to Problems of 'Culture Shock'" *Trends* 4 (1972): 1 - 64.

*munication ability*, “the ability to communicate with foreign nationals using their forms of ‘body language’ such as touch, eye movement, physical distance between self and others, facial expressions, and gestures.”<sup>23</sup>

**The Biographical, Interest, Attitude Inventory (BIAI), the Navy Overseas Adjustment Scale (NOAS) and the Cross-Cultural Interaction Inventory (CCII), and the Navy Overseas Assignment Inventory (NOAI)**

The BIAI, NOAS and CCII instruments were developed out of the United States Navy’s need for criterion measures related to intercultural success that would both improve training and produce a predictive instrument in screening and selection.<sup>24</sup> The first instrument developed was the Biographical, Interest, Attitude Inventory (BIAI).<sup>25</sup> An original pool of 500 items selected from various sources or written specifically from behaviours thought to maximize positive interaction was developed, out of which 109 items were chosen and pilot tested on a sample of Navy recruits for readability, clarity, and understandability. This reduced the number of items further to 98 items along seven dimensions (sociability, empathy, intellectual curiosity, patience, adaptability, acceptance, and morality), which then comprised the field-tested version of the BIAI.

The Strong Vocational Interest Blank (SVIB) which had strong military and civilian research evidence of its predictive ability for successful work in North America, was also included in the instruments in the preliminary field-test. The SVIB had never previously been used as a predictive test of cross-cultural competence.

A third scale, the Navy Overseas Adjustment Scale (NOAS) was specifically developed to provide information on a person’s level of effective functioning in Japanese culture. For rating accuracy a mixed standard scale procedure was utilized. Twelve individuals who had prior overseas experience and/or worked in the cross-cultural field supplied descriptions of overseas adjustment which were rank-ordered by sixteen others associated with cross-cultural research, resulting in a description of ten traits considered to be the best indicators of successful overseas adjustment. Each trait description was rewritten three times to produce a low, medium, and high statement of achievement for that trait,

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<sup>23</sup>Michael F. Tucker and Vicki Eaton Baier, Research Background for the Overseas Assignment Inventory (Boulder, CO: Moran, Stahl and Boyer, Inc., 1982), pp. 8-9.

<sup>24</sup>For the four-part research related to selection and screening conducted on the Navy by the Center for Research and Education see Michael F. Tucker, Screening and Selection for Overseas Assignment: Assessment and Recommendations to the U.S. Navy (Denver, Colorado: Extracts from a report to the U. S. Navy by The Center for Research and Education under Contract #N00600-73-D-07800, July 1974), pp. 1-108.

<sup>25</sup>For the instrument see Appendix A in Ted M. I. Yellen and Sandra J. Mumford, The Cross-Cultural Interaction Inventory: Development of Overseas Criterion Measures and Items that Differentiate between Successful and Unsuccessful Adjusters (San Diego, CA: Navy Personnel Research and Development Center, U.S. Navy Personnel Research and Development Center, San Diego, California 92152, 1975), pp. 1-67.



resulting in a 30 statement NOAS. A Kunin (“faces”) scale to tap satisfaction was also included. The BIAI items were designed to measure the amount of interaction with host country nationals while the NOAS was designed to measure the depth of understanding and quality of these interactions.

The BIAI and SVIB were administered to 249 Navy personnel in Japan who had been nominated by officers and peers as adapted or as non-adapted. Of this group 42 had previously participated in the data-collection stage of the study, 26 of which were deemed successful and 16 as unsuccessful. Two criterion scoring procedures were used. In the first procedure the nine dimensions contained in the BIAI were scored and combined with the Kunin satisfaction score. In the second procedure the ten trait scores in the NOAS were combined and used as a single overall criterion score. These two procedures on the 42 original individuals were assessed independently. The first procedure (BIAI and SVIB) correctly classified 10 of the 16 (62%) individuals nominated as unsuccessful and correctly classified all of the individuals nominated as successful. The NOAS scale was not as accurate and therefore was dropped from the remainder of the study. The SVIB was found to have high percentage of overlap and low validity coefficients (only 0.25), and these, combined with the excessive length (399 questions) caused the researchers to drop it from further testing. The BIAI and the Kunin scale found to be significant for the original 42 were then used to classify the remaining 207 individuals in the sample as successful or unsuccessful.

The total sample was randomly split into two groups, a key-construction group (n=125) and a cross-validation group (n=124). Items from the BIAI were then subjected to KEYCON Item Analysis. If rates of endorsement exceeded 16 percent in the key-construction group and 9 percent in the cross-validation group, items were retained. The result was that a total of 38 BIAI items out of 98 were selected for inclusion in a new instrument called the Cross-Cultural Interaction Inventory (CCII).<sup>26</sup> The point-biserial correlations (validity coefficient) between scores on the 38 items were .63 for the key-construction group and .66 for the cross-validation group ( $p < .01$ ). Tilton’s overlap coefficient was 27 percent indicating very little overlap between the distribution of scores on the CCII for individual classified as successfully adapted and unsuccessfully adapted. These are very high scores for prediction research.

One of the major problems with this study was that it consisted of concurrent validation only. The sample in Japan had completed the criterion and predictor instruments at the same time. The longitudinal validity of the CCII was not determined. So in 1975 the Navy initiated a new project with the Center for Research and Education (CRE) to develop

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<sup>26</sup>Appendix F, *ibid*.

the CCII further. CRE used the 38 CCII items as the core of a new instrument, the Navy Overseas Assignment Inventory (NOAI) but added nearly 500 items which were to reflect 20 dimensions that are potentially related to overseas adjustment. Out of this list, 78 items were identified (not empirically but by editing for redundancies and compliance with the Privacy Act of 1974), Likert scaled, and printed. This form of the NOAI was mailed to Navy personnel who were scheduled to depart for overseas assignment. Over 4,000 individuals' forms were returned of which 3,010 were usable for analysis.

In the meantime, to develop criterion data in order to validate the NOAI, two forms were prepared (Survey of Navy Overseas Personnel SONP), one to go to immediate supervisors of those involved in the study and the other a self-rating form to be completed by study participants. Section I consisted of an overall adjustment rating and Section II of behaviourally anchored rating scales on 13 dimensions of overseas adjustment arising out of earlier Peace Corps research. Of the 3,010 who completed the NOAI, 2,250 were located and each sent two criterion instruments, a supervisor's and a self-report. Out of 3,700 instruments returned, complete data (matching forms) produced a total of 1,627 individuals. The 78 items in the NOAI were statistically analyzed to construct multi-item scales for prediction of the criteria. Means and variances were computed and 23 items with variances less than .60 were deleted from the 78. On the remaining 55 items principal components factor analysis was performed with the emergence of 18 factors. Of these, eleven were mathematically and meaningfully logical. Cronbach alpha coefficient based reliability estimates reduced these factors to ten multi-items scales: 1) expectations regarding overseas assignment, 2) ethnocentrism, 3) socially desirable responses, 4) proselytism, 5) trust in people, 6) intolerance for Non-Americans and less comfortable surroundings, 7) personal control, 8) behavioural flexibility, 9) impatience, and 10) non-adaptability.

High reliability estimates were obtained for the supervisory and self-behaviourally anchored ratings as well as for the Kunin Faces measures. Means, variances, simple correlation coefficients, and multiple regression analyses were performed on the NOAI predictor scales and SONP criterion measures for the sample group of 1,627 with the result that significant correlations were found for all ten of the NOAI scales. Of the criterion measures the self-ratings in general and the affect (Kunin Faces) criterion in particular were most predictable with the NOAI. A new highly predictable scale emerged out of content analysis, *expectations regarding overseas assignment*, which at 28.8% of the variance of the NOAI was the highest single item.<sup>27</sup>

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<sup>27</sup>Michael F. Tucker and Vicki Eaton Baier, Research Background for the Overseas Assignment Inventory Boulder, CO: Moran, Stahl and Boyer, Inc., 1982), pp. 12-15.



Research for the NOAI identified 20 dimensions related to overseas success and made effective use of the Kunin Faces scale to measure satisfactions and affect. These dimensions were in turn incorporated into later work to be undertaken by the Canadian International Development Agency (CIDA)<sup>28</sup> and verified by Dr. Robbins Hopkins in her study of adolescent exchange students.<sup>29</sup> They have also been incorporated into this present study as dependant variables and are described in the next chapter.

### Ruben's Behavioural Assessment Scale for Intercultural Communication

Ruben and his colleagues<sup>30</sup> have argued cogently for the necessity of behavioural observation of intercultural effectiveness as a necessary indicator of competence.<sup>31</sup> In their review of the literature they have identified seven behavioural dimensions important to intercultural competence. These include 1) display of respect,<sup>32</sup> 2) interaction posture,<sup>33</sup>

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<sup>28</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979).

<sup>29</sup>Robbins Sankey Hopkins, "Defining And Predicting Overseas Effectiveness for Adolescent Exchange Students" (D. Ed., University of Massachusetts, 1982).

<sup>30</sup>Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," Group & Organization Studies 1 (1976): 334 - 354. Brent D. Ruben, "Human Communication and Cross-Cultural Effectiveness," in Intercultural Communication: A Reader, Larry Samovar and R. Porter (ed.) (Belmont, CA: Wadsworth, 1985), pp. 338-346. Brent D. Ruben, Lawrence R. Askling and Daniel J. Kealey, "Cross-Cultural Effectiveness," in Overview of Intercultural Education, Training, and Research: Vol. 1--Theory, David Hoopes, Paul Pedersen and George Renwick (eds.) (Washington, D.C.: Society for Intercultural Education, Training, and Research (SIETAR), 1977), pp. 92 - 105. Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-Cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 15 - 47.

<sup>31</sup>The authors define *verbal/cognitive competency*- as "the capacity to conceptualize and articulate variables, dimensions and issues that need to be taken into account to explain or predict effective functioning in a particular situation--may be a *necessary* condition for communicative or social competence. *Behavioral competence*-the capacity to display behaviors that are defined as appropriate and functional by others--is a *sufficient* condition for effective social functioning and is at least a minimum condition for success in many task-oriented situations." Brent D. Ruben, "Assessing Communication Competency for Intercultural Adaptation," Group & Organization Studies 1 (1976): 336. Author's emphases. Ruben and Kealey explain this by saying, "It is not uncommon for an individual to be exceptionally well-versed on the theories of cross-cultural effectiveness, possess the best of motives, and be sincerely concerned about enacting the role accordingly, yet still be unable to demonstrate those understandings in his own behaviors. Even an awareness of the familiarity with relevant skills is not a guarantee of the ability to consistently display those skills and understanding behaviorally." Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-Cultural Adaptation," International Journal of Intercultural Relations 3 (1979): 19-20. cf. Ruben, "Assessing Communication Competency...", p. 335.

<sup>32</sup>*Display of Respect*: "the expression of respect confers status upon the recipient, contributes to self-esteem, and fosters positive regard for the source of the communicated respect. Respect is conveyed in a variety of ways--through eye contact, body posture, voice tone and pitch, and general displays of interest. Attending behaviors may be expressed in varying degrees, ranging from highly positive displays of respect and regard to minimal regard, or even disregard." Ibid., p. 339.

<sup>33</sup>*Interaction Posture*: "the ability to respond to others in a descriptive, nonevaluating, and nonjudgmental way... [Interaction posture fosters] the development of a supportive climate and

3) orientation to knowledge,<sup>34</sup> 4) empathy,<sup>35</sup> 5) self-oriented role behaviour,<sup>36</sup> 6) interaction management,<sup>37</sup> and 7) tolerance of ambiguity.<sup>38</sup> Each dimension was described along a five-point continuum for potential display of behaviours (except for “orientation to knowledge” which was based on a 4-point scale).<sup>39</sup> Pre-testing of these dimensions was undertaken in 1976 on eight families (19 persons) with the Canadian International Development Agency (CIDA) being prepared for overseas assignment. Each cooperant and spouse was observed unobtrusively by three trained observers and given ratings on a 5-point Likert -type continuum. The ratings of the observers were then compared using the Pearson Product-Moment Correlation. All scales except task-role behaviour and relational role behaviour realized inter-rater correlations of .001 to .05 levels, considered to be appropriate. Factor analysis was then done to cluster subjects according to similarity on the indices, resulting in three types of orientation.

In 1977, effort was made to explore the relationship between communication behaviours observed in the pre-test and post-test adaptation.<sup>40</sup> Since “adaptation” criteria had to be conceptualized, from a review of the literature Ruben and Kealey operationally defined adaptation along three dimensions: 1) the presence or absence, directionality, and intensity of *culture shock*, 2) *psychological adaptation* (referring to the psychological well-being, self-satisfaction, contentment, comfort-with, and accommodation-to a new environment), 3) *interactional effectiveness* (referring to the participation with host nationals

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indicates a concern for the other person involved in the transaction...and thereby improve the quality of the relationship.” Ibid., p. 340.

<sup>34</sup>*Orientation to Knowledge*: “the more a person recognizes the extent to which knowledge is individual in nature, the more easily he will be able to adjust to other people in other cultures, whose views of what is ‘true’ or ‘right’ are likely to be quite different.” Ibid.

<sup>35</sup>*Empathy*: “the capacity to ‘put oneself in another’s shoes,’ or to behave as if one could.... [Ability to] project an interest in others clearly and ..to obtain and reflect a reasonably complete and accurate sense of another’s thoughts, feelings, and/or experiences.” Ibid.

<sup>36</sup>*Self-oriented Role Behaviour*: “Behaviors that involve the initiation of ideas, requests for information, seeking of clarification, evaluation of ideas, etc. are directly related to a group’s task or problem-solving activities. Behaviors that involve harmonizing, mediation, gatekeeping, compromising, etc., are related to the relationship-building activities of a group. The capacity to be flexible and to function in both sorts of roles in either a balanced or cyclic fashion can contribute to effectiveness within an organizational context.” Ibid.

<sup>37</sup>*Interaction Management*: the ease with which an individual is able to ‘manage’ (or fail to manage) interactions of which s/he is a part. “Effective management of interaction is displayed through taking turns in discussion and initiating and terminating interaction based on a reasonably accurate assessment of needs and desires of others.” Ibid., p. 341.

<sup>38</sup>*Tolerance of Ambiguity*: “the ability to react to new and ambiguous situations with little visible discomfort.” Ibid.

<sup>39</sup>For scale (continua) of these dimensions see *ibid.*, pp. 346-352.

<sup>40</sup>See Brent D. Ruben, Daniel Kealey and Lawrence R. Askling, “Factors in Personal Adaptation, Culture Shock, and Effectiveness in a Developing Country: A Descriptive Profile of the Canadian Technical Adviser and Family After One Year in Kenya,” Conference: Third Annual Conference of the Society for Intercultural Education, Training, and Research (SIETAR), (Chicago, Illinois: 1977).



and their way of life) and 4) *transfer of skills* (the imparting of skills, knowledge, competencies, and understandings to another).<sup>41</sup> The sample was 14 subjects (seven CIDA technical advisers and their wives) who had attended the same week-long pre-departure training program and had been in Kenya for approximately 12 months. Each subject completed a self-report questionnaire and was interviewed by a researcher. Questions related to the three dimensions were embedded in a larger report asking for information related to 1) personal life, 2) vocation, 3) family information, 4) social interaction, and 5) adjustment.

*Culture Shock* was calculated by asking each participant to write three words which best described his or her experience (from a list of 156 adjectives) 1) during the first few weeks, 2) at the end of three-four months, 3) at the end of seven-eight months, and 4) at the end of the year. Each adjective was valenced at -1, +1 or n (neutral) for the positive or negative orientation of the word. All were averaged and the average was plotted on a continuum from "no apparent culture shock" to "pronounced culture shock."

*Adjustment* relative to cultural, vocational, social, linguistic, political, and personal dimensions was measured with three self-report indicators and a clinical psychologist's observations. The first self-report included responses to open-ended questions on levels of comfort, acceptance, and satisfaction with life and work in Kenya. Responses were again valenced positively or negatively and converted to a 1 - 5 metric to facilitate comparisons.<sup>42</sup> A second adjustment measure utilized the three words at the end of the first year that had been identified in the *culture shock* question. These scores were again converted to metric for comparative purposes. A third adjustment measure was derived from scores arising out of a six-item alienation-adjustment index. Scores from all six items for each individual were computed, differential valence sums determined, and conversion to metric undertaken as with the other measures. A fourth adjustment measure, based on the field observations of the psychologist, considered apparent levels of frustration, depression, anxiety, enthusiasm-boredom, and optimism-pessimism.

*Effectiveness* was determined by self-report, observer assessment, and peer and supervisor ratings on cultural and interactional participation. The self-report was comprised of open-ended questions on behaviours and orientation toward nationals, work, perceived effectiveness in a developing country, and reward and disillusionment at work. Again, as with many of the other measures, positive and negative responses were valenced and converted to metric for comparability. Observer assessment was made by watching each subject's interactions with nationals at work along lines of concern for and success at

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<sup>41</sup>Brent D. Ruben and Daniel J. Kealey, "Behavioral Assessment of Communication Competency and the Prediction of Cross-Cultural Adaptation," *International Journal of Intercultural Relations* 3 (1979): 21-22.

<sup>42</sup>For tables see *ibid.*, p. 29.

transfer-of-skills and apparent positive regard for and understanding of nationals and their culture. The peer and supervisor assessments were based on Likert-scale questions asked by an interviewer on subject effectiveness. Where respondents were unwilling to rate subjects in quantitative terms, qualitative judgements were probed, valenced, and converted to a 1 to 5 metric.

Inter-rater reliability was calculated using Spearman Rank-Order Correlation. *Culture shock* was found to be poorly related to *effectiveness* and *adjustment* ( $r=0.220$  and  $-0.130$ ), while *effectiveness* and *adjustment* were strongly correlated at  $0.692$  ( $p=0.005$ ). While all seven behavioural dimensions predicted to *culture shock* ( $p=0.10$  or less<sup>43</sup>), only *respect* and *interaction management* related to *adjustment* at less than the  $0.10$  significance level. Six of the seven dimensions predicted to *effectiveness*. Because *respect* predicted to adjustment but less so to effectiveness, while *interaction profile*, *task role behaviour*, *orientation to knowledge*, *self-centred behaviour*, and *ambiguity tolerance* predicted well to effectiveness<sup>44</sup> and not so well to adjustment, the three dimensions (effectiveness, adjustment, and culture shock) should not be assumed to be interchangeable as criteria for adaptation.<sup>45</sup>

The correlations of behavioural dimensions with *culture shock* resulted in some very interesting findings. *Orientation to knowledge* as the best predictor ( $r=0.705$ ,  $p=0.005$ ) suggests that “persons who were most aware of the personal and subjective nature of their perceptions, knowledge, values, biases, and so on, experienced the most intense culture shock.”<sup>46</sup> Inner turmoil (culture shock) results as these individuals attempt to resolve the incongruence caused by their personal values confronting a concurrent recognition of the reality and validity of alternate values within the cultural context.

A second finding was that people who were more relationally oriented in inter-personal and group situations tended to experience higher culture shock than those who were not so relational, possibly because of the loss of support relationships that they had experienced.<sup>47</sup> Higher degrees of empathy, interaction management, and interestingly, non-judgementalness also associated with higher culture shock.

The highest correlation with *effectiveness* was inverse, tied to *task-oriented behaviour* ( $r= -0.502$ ,  $p=0.05$ ). Apparently, the stronger one’s task-orientation (a pattern associated with

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<sup>43</sup>Ruben and Kealey in this study departed from the usual alpha standard of  $< .5$  and reported alpha  $< .10$  as significant. Only *orientation to knowledge* and *relational role behaviour* met the  $p=<.5$  standard.

<sup>44</sup>Of the six, only *task-role behaviour*, *extent of self-centred role behaviour*, and *interaction profile* met the standard alpha  $< .5$ .

<sup>45</sup>Ibid., p. 38.

<sup>46</sup>Ibid., p. 40.

<sup>47</sup>As a predictor, *relational role orientation* achieved  $r=0.687$  and  $p=0.01$ . Ibid.



success in the West), the less effective the individual was in the cross-cultural context. Furthermore, individuals who displayed stronger self-centred roles appear to be less effective on the field, while those who in Canada were observed to be generally non-judgemental, respectful, open in knowledge orientation, and tolerant of ambiguity were more effective on the field than those who did not have these orientations.<sup>48</sup>

In spite of the fact that the sample was very small and liberal standards of statistical significance were used, this study gave empirical support to the behavioural assessment method and to the seven dimensions suggested by Ruben. Further support to these dimensions has been given in a study done by Olebe and Koester<sup>49</sup> on a revised instrument based on Ruben's scale (referred to as BASIC), utilizing all but one scale (individualistic roles) on three sets of U.S. and international students in university residence halls (n=263). One-way analysis of variance was carried out on each item of BASIC and the total score as dependent variables and on the intercultural context (high, moderate, and low) as the independent variable. Factor analysis with varimax orthogonal rotation on U. S. subjects and international students accounted for 48.4% and 47.5% of the variance respectively. Analysis of variance showed little significance difference between the subject groups on the BASIC score. For U.S. students, *empathy*, *display of respect*, and *relational roles* formed the highest factor loadings, while for international students, *interaction management*, *relational roles*, and *display of respect* formed the highest factor loadings. The findings indicated a similar structure to BASIC regardless of the respondent's culture and regardless of the extent of the intercultural context, lending credence to Ruben's original work as theoretically sound.<sup>50</sup> Because of the empirical credence given to the behavioural dimensions, they were included with some modification in the empirical research undertaken by Hawes and Kealey with CIDA personnel in 1979,<sup>51</sup> and later by Robbins Hopkins in 1982,<sup>52</sup> and in this current study as independent variables in some instruments in the present study.

#### Hawes and the "Selection Weekend" Review, 1977

Since 1973 the Human Resources Directorate (HRD) of the Canadian International Development Agency (CIDA) had been using an expensive approach to pre-field selection

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<sup>48</sup>Ibid., p. 42.

<sup>49</sup>Margaret Olebe and Jolene Koester, "Exploring the Cross-Cultural Equivalence of the Behavioral Assessment Scale for Intercultural Communication," International Journal of Intercultural Relations 13 (1989): 333 - 347.

<sup>50</sup>Ibid., p. 341.

<sup>51</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment. (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979).

<sup>52</sup>Robbins Sankey Hopkins, "Defining And Predicting Overseas Effectiveness for Adolescent Exchange Students" (D. Ed., University of Massachusetts, 1982).

founded on “assessment centre methods (selection weekends)” used in the United States by business and utilizing behaviour observation, standardized criteria, and group simulations. Effort to standardize criteria was begun in 1974 when a consultant firm was engaged to interview Canadians working in six Francophone countries.<sup>53</sup> Fourteen dimensions were isolated and submitted to CIDA staff and ex-cooperants<sup>54</sup> for ranking. The top eleven were retained and subjected to observation under simulated, behaviour-based conditions.<sup>55</sup> As a result of these assessments, in 1976 the dimensions were further reduced to five: *initiative (participation)*, *tolerance (reaction to difficulties)*, *autonomy (inner resources)*, *empathy (attitude to others)*, and *judgement*. In 1977 a small-scale study was undertaken to determine 1) the degree of congruence between the simulated (pre-field) predictors and the same criterion dimensions in the cross-cultural field situation, 2) the importance of the five dimensions, 3) other situational factors which might affect adjustment, and 4) factors which should be considered in the measurement of successful performance.

A sample of 17 Canadians working in Francophone Africa who had previously been selected through the “selection weekends” was chosen. Interviewers focused on five questions with at least ten respondents who knew each subject professionally and socially. The first question measured congruence of dimensions wherein respondents were asked to rate each subject on a 1 to 7 Likert Scale on each of the dimensions and justify the selection by behaviour examples. The second question asked each respondent to rate the minimum level required of each dimension to ensure successful performance on the field and to rank each of the five dimensions in order of relative importance. The third question asked what other personal traits might be considered important in cooperant selection; the fourth what environmental factors affect adjustment; and the fifth how each respondent would determine the successful performance of a cooperant.<sup>56</sup>

The mean field rating obtained for each subject from the interview analysis was correlated with three predictor scores obtained from 1) mean observer rating, 2) mean sociogram rating (taken pre-field), and 3) a composite rating of scores from each of the observers and the mean sociogram. Pearson Product-Moment Correlation on congruence of measurement showed four significant correlations (only with *tolerance* did predictor and criterion measurements not correlate significantly). Although the correlations were not high

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<sup>53</sup>F. Allaire and Y. Joly, Étude sur le rôle du cooperant canadien de l'ACDI en Afrique francophone, 3 Vol., (Montreal: I.F.G., Inc., 1974).

<sup>54</sup>“Cooperant” is the term used by CIDA for their volunteers sent cross-culturally.

<sup>55</sup>Frank Hawes, “Validating the Selection Weekend Method in the Assessment of Candidates for Overseas Assignment,” (Ottawa, Ontario, Canada: unpublished mimeographed manuscript, Canadian International Development Agency, 1977), p. 6.

<sup>56</sup>*Ibid.*, pp. 9-10.



there was significant congruence on most dimensions between pre-field selection scores and those obtained on the field.<sup>57</sup>

One of the weaknesses of the study was the absence of inter-rater reliability coefficients in the pre-field data. A second caution that emerged related to interpretation of measures of the traits identified with each dimension as these were viewed differently in the same subject by different respondents depending on the context of the situation.<sup>58</sup> For example, high autonomy may have been seen in professional relations but low in inter-relationships with close friends.<sup>59</sup> However, pre-departure and field-based correlations on the dimensions were significant enough that they also were included in the Hawes and Kealey 1979 and Robbins Hopkins' 1982 studies and have been included in this present study in modified format.

### **Hawes and Kealey and the Canadian International Development Agency, 1979**

As a follow-through on Hawes 1977 study, the President's Committee of the Canadian International Development Agency (CIDA) commissioned Frank Hawes (a private consultant) and Dan Kealey, Chief of Research and Evaluation of the Briefing Centre, to conduct research on 1) adaptability of Canadians, 2) receptivity of host cultures, and 3) capacity of Canadians to transfer technology. It was decided to reduce the study to two specific objectives: identifying the components of overseas effectiveness, and developing a generalized profile of individuals who are effective on assignment to developing countries.<sup>60</sup> The sample included 250 Canadians (160 technical advisers and 90 spouses) in 26 projects in six countries in Asia (Pakistan and Afghanistan), East Africa (Kenya), Francophone West Africa (Senegal), the Caribbean (Haiti), and Latin America (Peru) as well as about 90 national colleagues and supervisors.<sup>61</sup>

Four categories of instruments were prepared: self-ratings, Canadian colleague ratings, host national ratings, and open-ended questions. These tapped two sources of data--opinions and categorical ratings. Opinions, as open-ended questionnaires, asked for input on a range of issues. Each national and Canadian was asked five questions related to the skill-transfer capability of Canadians, selection and preparation of Canadians, and expectations

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<sup>57</sup>Ibid., p. 22.

<sup>58</sup>See discussion on "trait" vs. "state" in Chapter 2 on the influence of situation and environment on trait/character expressions.

<sup>59</sup>Ibid., pp. 23, 25.

<sup>60</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979), p. xv, xix.

<sup>61</sup>Frank Hawes and Daniel J. Kealey, "An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment," International Journal of Intercultural Relations 7 (1981): 242.

regarding transfer of skills. Canadians were asked six additional questions regarding their personal experience overseas, problems faced, and what they liked best. Opinions from the open-ended questions were content-analyzed to determine emergent themes. Five factors related to overseas effectiveness emerged from Canadian opinion: 1) the need to have professional competence and background, 2) flexibility, tolerance toward, and acceptance of the host culture, 3) basic personal maturity and ability to handle frustration and enjoy life, 4) social skills with fellow Canadians because of necessary close interaction, and 5) ability to adapt to various environmental and situational restrictions beyond personal control. National opinions resulted in two factors: 1) adaptability to social customs and social involvement and friendship with nationals while making special effort to train local people, and 2) personal and family satisfaction with the overseas experience.<sup>62</sup>

Of greater significance was the development of categorical data of 20 *dependent* variables (measuring success on the field) and 57 measures of personal, interpersonal, and expectations *independent* variables (potential predictors of success). *Dependent* variables included measurements on 1) personal feelings (related to job, self, health, meeting nationals, country of posting, and language), 2) self-rated knowledge of the language, non-verbal communication, interaction with nationals, tourism, factual knowledge about country of posting, acceptance of local culture, enjoyable activities, technical background, job commitment, and concern with training others, 3) estimated amount of time spent in social activities with others, 4) degree of contribution to the work project, and 5) adaptation and effectiveness (personal adjustment, family adjustment, job effectiveness, and effectiveness in transfer of technology). Each subject was also rated on some of these dimensions by colleagues (two forms) and by nationals (one form).

*Independent self-report* variables measured personal dimensions of tolerance, initiative, flexibility, respect, frankness, family communication, self-confidence, listening skill, decision-making, perseverance, ethnocentrism, self-control, and capacity to build relationships as well as personal expectations.<sup>63</sup> Comparison of mean ratings between self, colleagues, and nationals showed some halo and leniency effects on self-ratings but reliability was sufficiently high except for the areas of knowledge of local language and concern with training.

Principal components factor analysis with Varimax rotation on 20 of the *dependant* self-rated criteria variables yielded four factors accounting for 92% of the variance:

1) personal feelings of satisfaction (68% of the variance), 2) overall effectiveness/self-rated (11% variance), 3) professional/cultural adjustment (9%), and 4) concern with training (3%).

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<sup>62</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development, pp. 26-28.

<sup>63</sup>Ibid., pp. 8-16.



The mean ratings of Canadian colleagues on each subject was also factor analyzed and resulted in three factors with a total 89.7% of the variance: intercultural interaction and training (66% of the variance), job performance (15%), and personal/family adjustment and satisfaction (8%). Factor analysis on national ratings of each subject resulted in one factor--overall effectiveness/ national rated. For each subject each of the eight factors was reduced to a scale and tested for minimal internal reliability with the Alpha coefficient and maximum interscale correlation ("Max I"). Since Alpha was greater than the Max I, internal reliability was considered adequate.

Pearson Product-Moment Correlations and Factor Analysis were undertaken on the *independent* self-rated predictor measures. Factor analysis resulted in eight factors for the Personal Dimensions Inventory with a total of 78% of the variance: 1) self-confidence/initiative (22.1% of the variance), 2) frankness (12.3 %), 3) spouse/family communication (11.1%), 4) cautiousness (10.2%), 5) interpersonal interest (7.3%), 6) interpersonal harmony (6.8%), 7) rigidity (5.7%), and 8) non-ethnocentrism (3.3%).<sup>64</sup> Factor analysis on the Personal Expectations measure remained at the four items in the measure. Canadian colleague-rated measures produced two factors accounting for 87.7% of the variance, interpersonal skills (comprised of six items--flexibility, respect, listening skill, relationship building, self control under stress, and intercultural sensitivity--for 72% of the variance) and self-assertion (including initiative, self-confidence, and frankness for 16% of the variance). Scales were then constructed on each of these derived factors and assessed for internal reliability through means, standard deviations, range, Cronbach's Alpha coefficient, and maximum interscale correlation. Alpha statistic again was relatively high and in excess of the Max I, the most reliable scale being the Interpersonal Skills.

Factors from both dependant and independent measures were compared with stepwise multiple regression analysis to determine the degree of statistical relationship between the variable factors. Only two criteria measures were not found to have any significant relationship with any predictor (independent) measures--overall effectiveness/self-rated and concern with training/self-rated. The best predictor was the variable *Interpersonal Skills* which correlated to a high degree with 1) personal feelings of satisfaction overseas, 2) overall effectiveness/national-rated, 3) job performance, 4) adjustment and satisfaction/colleague rated, and 5) intercultural interaction and training.

Re-analysis using an extreme group analysis technique comparing top and bottom quartiles (extremes of effectiveness and ineffectiveness) was undertaken to look for significant differences on the independent measures. *Interpersonal Skills* (composed of respect, listening skill, relationship building, self-control under stress, intercultural sensitivity,

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<sup>64</sup>Ibid., pp. 53-54.

and interpersonal flexibility) was the most reliable predictor for subjects consistently in the high (most effective) group,<sup>65</sup> followed closely by *Self-Assertion* (frankness, self-confidence, and initiative).

From the data, "overseas effectiveness" is seen as a process that involves four dimensions: 1) personal/family adjustment (satisfaction with living overseas, engaging in enjoyable activities, adjustment as a family unit, and successful coping with daily living overseas), 2) intercultural interaction (interacting with local people and making local friends, learning local languages and non-verbal communication, demonstrating factual knowledge about local realities), 3) professional competence which includes task accomplishment (technical background, job commitment, and achievement of daily responsibilities), and 4) transfer of knowledge.<sup>66</sup> The profile of the effective individual is centred around three features: interpersonal skills, self-assertion/identity, and realistic pre-departure expectations (realism about constraints in the overseas assignment but optimism about success). Interpersonal skills included sub-categories of behaviour demonstrating flexibility, respect for others, active listening, relationship building, self-control, sensitivity to the culture, initiative, confidence, and frankness. The construct was summarized as

the capacity to relate effectively with others. The effective individual overseas is open to and interested in other people and their ideas. He is cooperative, friendly, respectful of others, and an attentive listener; in short, he is capable of building relationships through interpersonal trust. He is aware of cultural factors when living overseas, and takes them into account. He is calm and relaxed in stressful conditions. He communicates well with his family.<sup>67</sup>

Self-assertion/identity was also summarized as an individual's

sense of self which he can express appropriately without disregard for others. He can be frank and outspoken, direct in his dealings with others. He asserts himself with confidence, is able to take the initiative and say what he feels. He is not afraid to take risks when necessary.<sup>68</sup>

The authors point out that while this profile may seem to be obvious to the reader it has been developed by sound empirical methodology, thereby giving it greater significance than mere intuition. Even the importance of the characteristics have been ranked so that, for example, while assertion may be more important than interpersonal skills in a job in North America the reverse is true in the cross-cultural context. Two surprise findings indicated the need for frankness (rather than tactfulness) and for risk-taking (rather than caution). Both of

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<sup>65</sup>"Interpersonal Skills was by far the most consistent predictor of the various dependent scale measures of effectiveness. Using both techniques and additional OVERALL dependent variables, Interpersonal Skills consistently predicted effectiveness on six of eight variables (including OVERALL)." Ibid., p. 92.

<sup>66</sup>Ibid., pp. 156-165.

<sup>67</sup>Ibid., p. 169.

<sup>68</sup>Ibid.



these characteristics have to do with self-confidence, initiative, honesty, and genuineness which make sense with managing stress- and uncertainty-related factors common to the intercultural context.

One critical finding related to transfer of knowledge. Both nationals and Canadians expressed doubt about their effectiveness at accomplishing this and a number of problems were cited, such as lack of counterparts, local bureaucracy, unrealistic project planning, and incomplete professional adaptation. Yet nationals had identified transfer of skills as a critical role for advisers. The major problem was found to reside in the amount of interaction with nationals. About 70% of the Canadians indicated that they spent less than 10% of their social time with nationals. Only 12% of them spent social time with nationals in the high and very high range, suggesting that perhaps only 12% of them would be considered by the nationals to be effective in their transfer skills, since intercultural interaction was described by almost all the nationals and some of the Canadians as critical for transfer of skills.

“To transfer skills to a national, a Canadian should be able to communicate with him. To communicate with someone effectively, one has to understand his point of view, his perspective of the world. To understand another perspective, it must be experienced. In other words, interaction with the local people is needed to appreciate their perspectives, needs, attitudes, and beliefs, and to effectively transfer skills.”<sup>69</sup>

Hawes and Kealey produced what has been recognized as a “state-of-the-art” empirical study, utilizing many of the methodological strengths and content of previous studies on a sample size large enough to make meaningful generalizations from the results. Both predictors and criteria (independent and dependent) variables were developed and measured both through self-report and through cross-check colleague and national ratings. Statistical analyses were thorough, utilizing factor analysis, reliability analysis using Cronbach’s Alpha coefficient and Max I intercorrelation calculations, and extreme group analysis of both predictor/criteria correlations. The main limitation of the study was identified by the authors as the concurrent rather than longitudinal design of the study, wherein independent (predictive) measures were taken before the cooperants went overseas followed up by the rest of the study so that the independent variables were truly predictive.<sup>70</sup> Dinges has also pointed out that the items identified which measure interpersonal skills and identity are complex interpersonal behaviours which have not been sufficiently described or defined in concrete terms, and therefore, in spite of the study, are still difficult to pinpoint.<sup>71</sup>

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<sup>69</sup>Ibid., pp. 176-177.

<sup>70</sup>Ibid., p. 66.

<sup>71</sup>Norman Dinges, “Intercultural Competence,” in Handbook of Intercultural Training, Vol. 1 - Issues in Theory and Design, Dan Landis and Richard W. Brislin (ed.) Pergamon General Psychology Series, (New York: Pergamon Press, Inc., 1983), p. 197.

### Hopkins and Youth for Understanding (YFU), 1982

Robbins Hopkins designed a longitudinal study to examine the personality characteristics which predict overseas effectiveness of adolescents participating in a year-long, host-family, cross-cultural exchange program.<sup>72</sup> The instruments, data collection, and data analysis were based on the Hawes and Kealey (1979) study described above with some modification and augmented by the Loevinger Sentence Completion Test (LSCT). Because the Hopkins study was focused on a student population which did not have jobs as such, two dimensions in the CIDA study which had been hypothesized for overseas effectiveness (“job effectiveness” and “effectiveness in transfer of technology”) had to be changed to “academic performance in school” and “adjustment to the school setting outside of academics.” Data collection instruments had to be changed to reflect these modified dimensions. For example, “concern for training” as an interpersonal variable was changed to “sharing his/her own culture” as an interpersonal variable. Raters in the Hopkins study included self, YFU local representative, and host family parent(s). Another change was that success and failure groups were identified for assessment, the failure group consisting of subjects who changed host families for a total of three or more families and the success group all others.<sup>73</sup>

The Loevinger Sentence Completion Test (LSCT) is a 36 item projective sentence completion test related to the “core functioning of individuals” on interpersonal relations and self-awareness, measuring the “overall mental process through which a person creates and maintains a frame of reference for understanding of self and others.”<sup>74</sup> The test identifies individual’s personality development on discreet and stable patterns of interpersonal and intrapersonal functioning along ten measurable stages (seven of which are major and three transitional stages). The LSCT has empirically proven reliability rating and has been tested cross-culturally on Japanese, Curaçans, and Germans and therefore was felt to be a valuable measure to include to determine *readiness* for cross-cultural host schooling.

Eighty high (secondary) school students from Uruguay, Argentina, Paraguay, and Venezuela on exchange to the United States and 129 high (secondary) school students from the United States on exchange to Australia participated in the study (n=209). All completed the LSCT at arrival orientation in their host country. At the end of eleven months each student filled out two standardized questionnaires, the self-rating form on adjustment and effectiveness in the host country as well as a second self-rating form based on behavioural descriptions of the student’s personal characteristics. These forms were adapted from the

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<sup>72</sup>Robbins Sankey Hopkins, “Defining And Predicting Overseas Effectiveness for Adolescent Exchange Students” (D. Ed., University of Massachusetts, 1982).

<sup>73</sup>Ibid., pp. 97-99.

<sup>74</sup>Ibid., pp. 102-103.



Hawes and Kealey/CIDA (1979) study with only minor modifications<sup>75</sup> to fit the student population's context. As well, each student rated his/her background and preparation for working in a foreign country and adjusting to a host family. In addition male and female subjects again completed their versions of the LSCT in their own language, completing each sentence item as desired. Finally, host mother, host father, and the YFU representative filled out two forms each per student covering the criteria and predictor measures.

Data analysis essentially followed Hawes and Kealey's pattern of utilizing means, standard deviations, and Pearson Product-Moment correlation followed by factor analysis, then construction of scales and assessment of internal reliability with the Cronbach Alpha statistic. Split-group analysis on the "failure" group with the "success" group resulted in five dependent scales significantly differentiating between the two groups: communication, interaction/activities, academic effectiveness, host mother criteria, and area representative criteria on each student. On independent (predictor) scales the difference these two groups were differentiated along six lines: self-confidence/initiative, natural family communication, interpersonal interest, interpersonal harmony, background for host school, and non-ethnocentrism.<sup>76</sup>

Generally, factor analysis on the various scale resulted in only single factors emerging and therefore was not very helpful. The LSCT accounted for two independent variables. With the exception of "affect toward host country," all dependent variables (criteria) were predicted with significant multiple correlations. For prediction of personality characteristics the LSCT scale added the variable "stage of ego development." Comparison between the factored self-rated and observer-rated dependent scales in the CIDA study with the constructed self-rated and observer-rated dependent scale in the YFU study do not show a great deal of difference.<sup>77</sup> Comparison of independent scales between the two groups showed five out of the seven CIDA scales to be equivalent.<sup>78</sup> Observer-rated independent scales added only the "need for appropriate background to adjust to living and studying overseas" as an additional variable.

This study defined the *effective* student overseas as one who 1) demonstrates commitment to the host family, 2) learns verbal and nonverbal language, 3) takes initiative in exploring the country, its customs, history, etc, 4) makes friends with host country people and enjoys activities with them, 5) experiences personal success in school, 6) adjusts to situations

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<sup>75</sup>For example, items derived from Tucker's 1979 study were included: extracurricular school activities, commitment to school work, to host family, and to activities and people, and sharing culture in classes, with entire school community, and with host family.

<sup>76</sup>Ibid., pp. 148, 187, 208.

<sup>77</sup>Ibid., p. 217

<sup>78</sup>Frankness, tenacity, and cautiousness were not identified by the results as significant. Ibid., p. 223.

encountered, and 7) reports positive feelings about one's self, physical health, and school experience.<sup>79</sup> Furthermore, this person has personal characteristics that 1) demonstrates self-confidence and initiative in making judgements and solving problems, 2) is communicative and develops close relationships, 3) shows interest in others, 4) respects others and maintains harmonious relationships with them, 5) is open to new ideas and experiences, 6) has appropriate background for host school work, and 7) is developmentally ready for the experience.<sup>80</sup>

Hopkin's study is valuable in that it empirically replicates and validates the instruments, methodology, and findings of Hawes and Kealey's CIDA study, which to date is still one of the most sophisticated studies that has been done on criteria and predictors for cross-cultural effectiveness. It also suggested that developmental "readiness" may be a factor in overseas effectiveness for young people.

### **McKee's Formative Evaluation of a Church of Christ Rural Training Program in El Peten, Guatemala, 1981**

The Pasadena, California-based Mission Training and Resource Center (MTRC)<sup>81</sup> of the Church of Christ provided special ten-day, on-field training seminars in El Peten, Guatemala for their missionaries that dealt with three topics: 1) spiritual formation, 2) incarnational identification (acculturation), and 3) evangelism and church growth (dealing with the strategies and the specific field methodologies for evangelism and the formation of new churches). Timothy McKee made a study of missionaries who had been through this field training. His primary purposes were to determine the effects of external and internal supports and demands on training results and to assess how field training influenced missionaries' ability to succeed as defined by an acculturation model and the goals of the training program.<sup>82</sup>

The sample included the entire population of Church of Christ missionaries in Guatemala divided into two groups, a control group of thirteen who had not participated in the Rural Training Program (RTP) and an experimental group of thirteen. The design was an

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<sup>79</sup>Ibid., pp. 229-230

<sup>80</sup>Ibid., p. 30.

<sup>81</sup>Mission Training and Resource Center provided both research and writing on mission (especially field selection and evaluation, communication of the Gospel, and church-planting) and training, as well as acting as a coordinating unit for the Churches of Christ to enable churches to do field selection for their missionaries, preparation for entry, training of sending congregations, selection of pre-field training for candidates, building good church-missionary relationships, on-field training, and consultation. Unfortunately, MTRC is no longer in existence.

<sup>82</sup>Timothy Gene McKee, "A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala," Volume 1 (D. Ed., Pepperdine University, 1981), pp. 6-8, 183.



ex post facto no control design. Scales had been written and pre-tested<sup>83</sup> using Guttman Scalogram analysis on four major areas of adaptation: 1) linguistic skills, 2) non-verbal skills, 3) socio-emotional orientation, and 4) task orientation.<sup>84</sup> Linguistic and non-verbal instruments utilized Brewster and Brewster's five stage scale for language and a general knowledge scale for non-verbals. Socio-emotional orientation scales were composed of item forms as monotonic statements which could be answered either positively or negatively. Presumably, increase of time in country would increase positive response. Task-orientation scales were developed with items measuring role conflicts and task orientation. Further to these instruments, three standardized tests were used--Family Adaptability and Cohesion Evaluation Scales (FACES), Schedule of Recent Experiences (SRE), and the Taylor-Johnson Temperament Analysis (T-JTA)--as well as a survey questionnaire and interviews to gather individual perspectives on adjustment and acculturative processes. Evaluation instruments and standardized tests were completed by all members at about the same time.

One-sample cases (seeking "goodness of fit" to determine if observed distribution of data fits theoretical distribution) with nominal level data were subjected to binomial equation, while ordinal level data was subjected to Kolmogorov-Smirnov one-sample tests. Two sample case measurements on nominal data requiring comparison of independent data utilized Fisher Exact Probability tests to determine significant levels (rather than exact probabilities), while ordinal level data was subjected to the Median Test and Mann-Whitney U. Correlation was undertaken on nominal data with the Contingency Coefficient C, on ordinal data with Spearman's Rho, and on interval data with Pearson's Product Correlation Coefficient measures.

Quasi-scales were computed for eight of the nine dimensions of the Guttman scale. Neither internal nor external support and demands correlated to the training. However, the experimental group (which received the field training) was discovered to have two main strengths over the control group: 1) Greater internal cohesion as a team, with stronger interpersonal interaction, spiritual and emotional linkage, and commitment, and 2) higher language proficiency. Otherwise there was no difference between the two groups on 1) missiological knowledge/awareness, 2) satisfaction with life and ministry, 3) amount of contact with local people, 4) having "best friends" from among the local people, 5) being engaged in more community activities proportionate to the amount of time spent in the country, 6) acculturative behaviours or adaptive patterns, or 7) mean-length-of-stay on field.

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<sup>83</sup>Pre-testing took place at Fuller Theological Seminary in Pasadena, CA on fourteen randomly selected non-U.S. students from the schools of Psychology, Theology, and World Mission. Hand tabulation indicated that scales would be reliable.

<sup>84</sup>All instruments are included in Timothy Gene McKee, "A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala," Volume 2 (D. Ed., Pepperdine University, 1981), pp. 508-670.

Both groups were attempting to contextualize their work by integrating medicine and evangelism (both spiritual and physical models--medicine as well as praying for the sick and anointing with oil) and spiritual resources acceptable to the people. Local materials and supplies were being used and training of national church leaders was occurring. Involvement in community was a major part of both teams. Thus, in the final analysis involvement in field training did make some difference as seen by high language proficiency, stronger team cohesion and spiritual dynamic, and greater acculturative speed (the experimental group formed later than the control group).

This study was weakened through a number of problems: the design was made ex post facto, criteria for "success" on the field were only generalized in terms of acculturation which was not clearly operationalized in the questionnaires,<sup>85</sup> the population sample was quite small, length of time on the field for the experimental group was not long enough to test "process-in-time" adaptation, and both groups had had essentially the same training (except for the 10 week on-field program which was being tested) thereby resulting in a lack of control or normative data against which to make a comparison. Nor were tested areas defined enough to have normative control standards or standardized measures of reliability.<sup>86</sup>

Thus, insufficient data was generated to formulate an operational definition of acculturation over time. None the less, this study was valuable in that it precipitated research as an exploratory study into the integration of acculturation and the influence of training. And McKee's findings indicated that integrated team training did make a difference between effective and non-effective teams. Furthermore, out of his background in educational research McKee included valuable evaluative content in his questionnaires some of which was adapted to this study.

#### Janet Metzger, 1984

As a follow-up to McKee's research Janet Metzger developed a study<sup>87</sup> in an attempt to discover whether length of time on the field correlates with acculturation, and whether

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<sup>85</sup>The author acknowledged this problem: "First, in setting up control or normative data, a standard of comparison needs to be decided: the worst, the best, and the average should be defined. Additionally, acculturation quotient must be set for behaviours in-field. Time must be considered. The quotient would be: acculturation equals manifested behaviors divided by the percent of time-in-field." Ibid., pp. 242-243.

<sup>86</sup>Acculturation occurs in several dimensions, such as socio-emotional adjustment, acquisition of trait behaviors, and task accomplishment. Different cognitive, attitudinal, and behavioural expressions are appropriate at various periods of time. These appropriate behaviors are not yet clearly defined. The measures used to tap these were relatively crude; there are no set comparative standards over time. Some of the more crucial differences might be defined only after several years or are defined in ways that have not yet been recognized. Ibid., p. 248.

<sup>87</sup>Janet G. Metzger, "A Field Study of Five Teams of Change Agents: An Evaluation of Training Results," Tenth Annual Conference of the Society for Intercultural Education, Training and Research, (SIETAR) International Conference, (Washington, D. C.: May 24, 1984), pp. 1 - 21.



team training correlates with adjustment and acculturation.<sup>88</sup> These issues had arisen in turn from the larger question as to whether acculturation and adjustment were determined more by team goals and team dynamics than by personal characteristics, and if so, whether and to what extent training could influence those team goals and dynamics. The study was based on a formative evaluation of five groups. Group 1 was a team of 24 students in intercultural communication who participated in field experiences together. Pre-tests and post-tests were done on this group. Group 2 was a team of 13 students similar to Group 1 but who had post-testing only to act as a control for pre-test sensitization. Group 3 was a team of ten graduate students (only 5 responding to the questionnaire; n=5) working in the same metropolitan (pluralistic) setting as groups 1 and 2. They had had no integrated team training (in group dynamics, goal setting, problem solving, etc.) though members had received intensive training in anthropology and/or intercultural communication. Group 4 was the same as Group 3, working in the same area and with the same ethnic group (n=9) and also without integrated team training. Group 5 (n=8) worked with the same ethnic group as teams 3 and 4, but it was trained during a period of immersion overseas with integrated team training techniques (including intensive introduction to anthropology and intercultural communication and the use of intercultural games, group dynamic exercises, goal setting sessions, and daily interaction with host nationals).

Measures of intercultural effectiveness used were participant observation, interviews, and survey questionnaires (based on the Kunin faces and the dependent and independent variables of the Hawes and Kealey 1979 CIDA study as well as questions and scales developed specifically to measure team commitment, cohesion, and group goals). Except for Group 1 which received both pre-test and post-test (at 3-weeks of training and 11-weeks of interaction) all teams received post-test survey questionnaires at 8, 11, or 14-weeks of training or interaction (depending on the extent of training). Pre-test and post-test results of Group 1 were compared; post-test scores of Groups 1 and 2 were compared for test effects; and post-test scores were compared on all groups.

To determine best predictors of success for these teams multiple regression analysis was done. T-tests were calculated on pre-test and post-test data for Group 1 as well as for independent samples from variables relevant to each of the groups. Multiple regression was used to determine the predictors for each of the major variables in the sample. Pearson correlation coefficients and factor analysis on the CIDA questions, along with a sphericity

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<sup>88</sup>Hammer, Gudykunst, and Wiseman had already found that training using a variety of methods to bring about cognitive, affective, and behavioural changes correlated highly with effectiveness. Mitchell R. Hammer, William B. Gudykunst and Richard L. Wiseman, "Dimensions of Intercultural Effectiveness: An Exploratory Study," International Journal of Intercultural Relations 2 (1978): 382 - 392.

test and R-factor analysis, varimax rotation using principal-component analysis with an eigenvalue cutoff of 1.0, resulted in three factors which were the same as in the CIDA study. Factor 1, which accounted for 68.5% of common variance, was labeled “intercultural interaction.” Factor 2 (20.8% of common variance) was labeled “adjustment” (arising from the Kunin faces dealing with personal adjustment), and Factor 3 (10.3%) included items related to commitment, peace, and pre-departure expectations and so was labeled “pre-departure concerns.”

Length of time on the field did not appear to correlate with acculturation, at least for such an early stage of interaction as these teams had. Fourteen weeks, which was the maximum test length, may be too short to be able to measure “acculturation.” However, Pearson Correlation found that team training was the best predictor for adjustment, while expectation was the best predictor for acculturation. T-tests showed little differentiation between the teams on the CIDA scores, although Group 5 did differ somewhat from Group 1 on acculturation, possibly showing that it was a different population from the other teams. Interestingly, the highly trained team did not always demonstrate the expected acculturative ability.<sup>89</sup>

It would appear that the design of this study needed to take into account the effects of length of time on the field. Ten and fourteen weeks were not long enough.<sup>90</sup> Furthermore, it may have needed to take into account the difference between immersion in another culture and country and interaction in another ethnic group within one’s own country. It is always possible to “withdraw” psychologically and physically from the situation, which cannot be done with immersion. This alone may have had an overwhelming neutralizing effect on the acculturative process, thereby defeating the study design. Metzger also suggested that where possible operational scales should be used to operationally define behaviours, such as the FSI Proficiency Scale rather than a general Likert-scale (from “somewhat” to “well”) on “I speak the language.” She further suggested that data must be interpreted carefully, since an individual’s perception of competence changes with time on the field, and that reliance must be not only on quantitative data and exploratory interview but also on qualitative data. These are valuable observations for future research design.

### Summary

This chapter has reviewed field-based empirical research most salient to this study. It is obvious that sophistication of research has developed over time and that studies have built on the findings and proven methodologies of previous research. Research related to

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<sup>89</sup>Ibid., p. 10.

<sup>90</sup>Ibid., p. 16.



intercultural success and competence initially focused on predictors,<sup>91</sup> then on criteria,<sup>92</sup> and finally on both predictors and criteria.<sup>93</sup> One weakness has been that most research has been undertaken on volunteers organizations (Peace Corps and CIDA especially), student exchange organizations (such as YFU), business, and the military. All of these tend to be "short-term" of no more than two years. Therefore the emphasis has been on adaptation and

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<sup>91</sup>For example, Charles Dicken, "Predicting the Success of Peace Corps Community Development Workers," Journal of Consulting and Clinical Psychology 33 (1969): 597-606. Walter Mischel, "Predicting the Success of Peace Corps Volunteers in Nigeria," Journal of Personality and Social Psychology 1 (1965): 510 - 517. Michael J. Uhes and John Shybut, "Personal Orientation Inventory as an Predictor of Success in Peace Corps Training," Journal of Applied Psychology 55 (1971): 498-499. George M. Guthrie and Ida N. Zektick, "Predicting Performance in the Peace Corps," The Journal of Social Psychology 71 (1967): 11 - 21. J. Sawyer, "Measurement and Prediction, Clinical and Statistical," Psychological Bulletin 66 (1966): 178-200. M. Brewster Smith, "Explorations in Competence: A Study of Peace Corps Teachers in Ghana," American Psychologist 21 (1966): 555-566. Morris I. Stein, "Predicting Volunteer Effectiveness," in Volunteers for Peace, (ed.) (New York, N.Y.: John Wiley & Sons, Inc., 1966), pp. 165 - 200.

<sup>92</sup>Hiroko Abe and Richard L. Wiseman, "A Cross-Cultural Confirmation of the Dimensions of Intercultural Effectiveness," International Journal of Intercultural Relations 7 (1983): 53 - 67. Mitchell R. Hammer, "Behavioral Dimensions of Intercultural Effectiveness: A Replication and Extension," International Journal of Intercultural Relations 11 (1987): 65 - 88. Mitchell R. Hammer, William B. Gudykunst and Richard L. Wiseman, "Dimensions of Intercultural Effectiveness: An Exploratory Study," International Journal of Intercultural Relations 2 (1978): 382 - 392. Jesse G. Harris Jr., "Identification of Cross-Cultural Talent: The Empirical Approach of the Peace Corps," in Culture Learning: Concepts, Applications, and Research, Richard W. Brislin (ed.) (Honolulu, Hawaii: University Press of Hawaii, 1977), pp. 182 - 193. Jesse G. Harris Jr., "A Science of the South Pacific: Analysis of the Character Structure of the Peace Corps Volunteer," American Psychologist 28 (1973): 232-247. Patty Weaver Kennedy and Ralph Mason Dreger, "Development of Criterion Measures of Overseas Missionary Performance," Journal of Applied Psychology 59 (1974): 69 - 73. Terrill Rudell Nelson, "Critical Cross-cultural Adjustment Skills Needed by Overseas Missionary Personnel: A Preliminary Study of Missionary Preservice Training Programs" (Ph. D., New York University, 1985). Hiroko Nishida, "Japanese Intercultural Communication Competence and Cross-Cultural Adjustment," International Journal of Intercultural Relations 9 (1985): 247 - 269. Michael F. Tucker, "CRE Studies of Peace Corps Training in Brazil," P.C. Program and Training Journal 1 (1973): 4 - 10. Michael F. Tucker, et al., Improving Cross-cultural Training and Measurement of Cross-cultural Learning (Denver, CO: Center for Research and Education, 1973). Richard L. Wiseman, Mitchell R. Hammer and Hiroko Nishida, "Predictors of Intercultural Communication Competence," International Journal of Intercultural Relations 13 (1989): 349 - 370.

<sup>93</sup>Frank Hawes, "Validating the Selection Weekend Method in the Assessment of Candidates for Overseas Assignment," (Ottawa, Ontario, Canada: unpublished mimeographed manuscript, Canadian International Development Agency, 1977), pp. 1-34. Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979). Frank Hawes and Daniel J. Kealey, "An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment," International Journal of Intercultural Relations 7 (1981): 239 - 258. Michael Tucker and P. G. Benson, "The Prediction of Intercultural Adjustment: A Longitudinal Validation," Conference: Society for Intercultural Education, Training, and Research, (Mexico City, Mexico: 1979). Ted M. I. Yellen and Sandra J. Mumford, The Cross-Cultural Interaction Inventory: Development of Overseas Criterion Measures and Items that Differentiate between Successful and Unsuccessful Adjusters (San Diego, CA: Navy Personnel Research and Development Center, U.S. Navy Personnel Research and Development Center, San Diego, California 92152, 1975), pp. 1-67.

adjustment, rather than acculturation. Generally, research on acculturation has been on immigrants<sup>94</sup> rather than on "sojourners" such as missionaries. In this sense, McKee's work was a beginning in this critical area. This study purposes to build on both the predictor/criteria based research that has been done in the past and integrate that with research on "process-in-time" acculturation with an attempt to determine how prior education and training may have influenced cross-cultural effectiveness and competence.

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<sup>94</sup>H. G. Barnett, et al., "Acculturation: An Exploratory Formulation," American Anthropologist 56 (1954): 973 - 1002. John W. Berry, "Acculturation as Varieties of Adaptation," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, 39 (Boulder, CO: Westview Press, 1980), pp. 9 - 25. John W. Berry, Uichol Kim and Pawel Boski, "Psychological Acculturation of Immigrants," in Cross-Cultural Adaptation: Current Approaches, Young Yun Kim and William B. Gudykunst (eds.) International and Intercultural Communication Annual, 11 (Beverly Hills, CA: Sage Publishing, 1987), pp. 62 - 89. Leonard Broom and John I. Kitsuse, "The Validation of Acculturation: A Condition to Ethnic Assimilation," American Anthropologist 57 (1955): 44 - 48. Dominique Desjeux, "Development as an Acculturation Process," Development: Seeds of Change 3 (1981): 33 - 38. Bruce P. Dohrenwend and Robert J. Smith, "Toward a Theory of Acculturation," Southwestern Journal of Anthropology 18 (1962): 30-39. Melville J. Herskovits, Acculturation: The Study of Culture Contact, (Gloucester, Mass.: Peter Smith, 1958). A. Irving Hollowell, "Sociopsychological Aspects of Acculturation," in The Service of Man in the World Crisis, Ralph Linton (ed.) (New York: Columbia University Press, 1945), pp. 171-200. Amado M. Padilla, "The Role of Cultural Awareness and Ethnic Loyalty in Acculturation," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, 39 (Boulder, CO: Westview Press, 1980), pp. 47 - 84. Raymond H.C. Teske and Bardin H. Nelson, "Acculturation and Assimilation: A Clarification," American Ethnologist 1 (1974): 361-363. S. Alexander Weinstock, Acculturation and Occupation: A Study of the 1956 Hungarian Refugees in the United States, (The Hague, Netherlands: Martinus, 1969).



## CHAPTER FOUR

### METHOD OF THE STUDY

#### Introduction

Method has to do with processes followed in accordance with acceptable research design. Robbins Hopkins' discussion on the empirical research design used by the developers of the 1979 CIDA study and in her 1981 YFU study emphasized that adequate empirical research has to have at least eight basic essentials.<sup>1</sup> First, there must be an *adequate sample size*. Small sample sizes do not allow for the generation of reliable results. The CIDA study was composed of 250 Canadians studying abroad; the YFU of 210 high school exchange students. This present study is based on a usable sample of 120 from a population total of 211 missionaries (i.e. the population of the five missions in the cities chosen plus the random sample from New Tribes Mission<sup>2</sup>).

The author went to Brazil with enough forms for the target population. However, due to logistical difficulties in contacting some of the missionaries in Brazil, failure of some to adequately fill out the questionnaire, loss in the mail of some questionnaires,<sup>3</sup> failure of some missionaries to either fill out questionnaires received<sup>4</sup> or to mail them, possible failure of missionaries to pass on cross-check questionnaires to missionary colleagues and to nationals,<sup>5</sup>

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<sup>1</sup>See Robbins Sankey Hopkins, "Defining And Predicting Overseas Effectiveness for Adolescent Exchange Students" (D. Ed., University of Massachusetts, 1982), pp. 89-93.

<sup>2</sup>Since New Tribes does not work in the cities where the other mission populations were located a different approach had to be taken to extract the sample. Mission administrators divided total population into two segments based on their perception of missionary effectiveness in work. Random sampling was then made in equal proportions from both segments. The total number drawn is the "population" in the chart above. The number of returns from this "population" is the sample size.

<sup>3</sup>Because the author had to fit into missionary schedule, on occasion subjects had insufficient time to fill out questionnaires during the time that he was with them. They were left with pre-addressed, stamped envelopes for the questionnaires. Loss of some in the mail is assumed.

<sup>4</sup>In one case, 15 missionaries with one large mission were at term-end at their training centre and too busy to fill out the questionnaires, so forms were left with a tape detailing instructions (the station head having also been given careful instructions). In due course, these questionnaires arrived in Canada but not one had been filled in. On four other occasions with 12 missionaries the same course was followed, also resulting in no return. Part of the problem was that the questionnaire is so extensive that its ten instruments took missionaries up to four hours to fill out. Without the presence of the author with them, the effort simply wasn't undertaken!

<sup>5</sup>The home office of one of the largest missions failed to pass on word to the Field Leader in Brazil that this study had been authorized. It was not until after three weeks of the six had passed that the Field Leader contacted his missionaries in the various cities to include them in the study. As a

and failure of nationals to fill out and mail their questionnaires,<sup>6</sup> this objective population return was not achieved. Total usable returns came from 120 missionaries (56.87% of the population in view).

Then this sample was unavoidably further reduced through factor analysis, step-wise regression analysis, and discriminant analysis to 91 subjects (43.13% of the total population) because these procedures require all independent factors to be analyzed against each dependent factor. Since missionary colleague questionnaires included some of the independent factors, the number of missionary colleague forms returned effectively became the common denominator for those types of analysis. To keep all statistical analysis consistent it was decided to cull all missionary forms which did not have returns from missionary colleagues. The following table shows the total population size,<sup>7</sup> two sample sizes, and two sample percentages of the total population.

Table 8: Comparison of Sample to Population Percentages

	Mission	Missionary Returns			Miss. Colleague Returns		
		Pop.	Sample	Percentage	Pop.	Sample	Percentage
1.	C&MA	19	15	78.94	19	14	73.68
2.	UFM Int'l	15	12	80.00	15	8	53.33
3.	ABWE	54	37	68.51	54	31	57.40
4.	S. Baptist	57	28	49.12	57	15	26.31
5.	CMML	13	6	46.15	13	6	46.15
6.	New Tribes Mission	53	22	41.50	53	17	32.07
Totals:		211	120	56.87%	211	91	43.13%

It may not be possible to take the samples from the three missions that had a return rate of 50% or less as truly representative because returns may be from individuals confident of their missionary skills, and those not completed or returned may be because of fear of self-exposure caused by the questionnaire. None the less, recognizing these potential weaknesses, for this study the sample sizes of 120 and 91 may be considered adequate. Three mission samples represent over 50% of the total population and a fourth is close to 50%. The other two (based on missionary colleague returns) are disappointingly less than 50% but will be

consequence, total time in every city to personally gather data from both missionaries and nationals was reduced, since he had to backtrack over much of the area already covered. Accordingly, he had to resort to leaving forms for nationals and missionary colleagues with each subject to be handed on to them and to be returned in pre-addressed, stamped envelopes. This may have been the single biggest obstacle in gathering data.

<sup>6</sup> Unfortunately, the author was not able to meet with colleagues and nationals but had to rely on the mail for return of their forms. This resulted in an even poorer return rate than from the missionaries. In some cases, because of problems with the postal system, national forms returned when missionary forms did not. In other cases, returns had to be rejected because not properly filled out leaving doubt as to the reliability of the data.

<sup>7</sup> Population includes only North American missionaries. Some missions like UFM Int'l also have missionaries from Europe as part of their total size.



included none the less. The samples of usable cross-check questionnaires included 103 missionary colleagues (culled to 91 when correlated with usable missionary questionnaires) and 97 Brazilian co-workers (culled to 83 when correlated with usable missionary questionnaires).

Secondly, criteria must be differentiated by collection of data from several sources such as self-report, colleague, supervisor, host nationals, etc., and along several categories or dimensions. This study attempted to differentiate criteria along lines of acculturation, contextualization of work, language learning, socialization, and personal characteristics, utilizing multiple sources through self-report forms as well as cross-check forms filled in by colleagues and nationals on each missionary. Cognitive, affective, and behavioural dimensions were included in the questionnaires.

Thirdly, criteria and predictor instruments that have been previously tested to ensure validity when adapted to an equivalent population are most likely to yield reliable results. Furthermore, rather than “reinventing the wheel” and generating entirely new sets of criteria or prediction, utilization of previously verified criteria strengthens the research process. The instruments developed by Hawes and Kealey not only clearly differentiated dimensions of intercultural effectiveness but have been verified in further empirical field research.<sup>8</sup> The instruments they developed were based on prior empirical studies, as described in Chapter 3. Furthermore, new instruments that were developed for this study were pre-tested on a sample of missionaries from five different missions working among North Americans Indians. Regression analysis of the variables indicated adequate differentiation between variables.

Fourthly, it is the researcher's responsibility to make sure that instruments developed or utilized actually *measure* the behaviours they are meant to. It is assumed that this will occur because of the considerable similarity between the CIDA study and this present study. For example, objectives are quite similar. The objectives of the CIDA study were to identify the components of overseas effectiveness and to develop a profile of effectiveness based on individual Canadians. In this study, the objective is to identify components of effectiveness but in terms of “process-in-time” *long-term involvement* in the culture (acculturation, socialization, and contextualization of work) and to identify, if possible, educational and training components that may have an effect in enabling effectiveness and competence. To accomplish this, additional instruments had to be developed, but the instruments utilized from the CIDA study still measure what they were intended to. Another similarity is that both groups had concern with “transfer-of-information;” CIDA with personnel technical

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<sup>8</sup>cf. Robbins Sankey Hopkins, *ibid.* See also Janet G. Metzger, “A Field Study of Five Teams of Change Agents: An Evaluation of Training Results,” Conference: Society for Intercultural Education, Training and Research, International Conference, (Washington, D. C.: 1984), pp. 1 - 21.

information and missionaries with biblical/theological/ecclesiological information, through evangelism, church-development, or teaching.

A major difference is that CIDA study subjects had been in country *for less than two years* (nearly 50% for one year or less) whereas missionary subjects have been in Brazil for no less than one year (24% between one and four years, 38% from five to twenty years, and 38% have been over 20 years in Brazil). Subjects in the CIDA study were Canadian volunteers, while subjects in this study include Canadian and American volunteers with mission societies, some of whom had been raised in Brazil, and therefore were essentially already acculturated.<sup>9</sup> It is assumed that “first level attrition” would already have occurred, culling those who would be termed “unsuccessful” in previous studies. This does not take into account that individuals may be included in the study who are not successful in their work but who stay on the field because it is presumed to be their “calling.” In spite of this difference between the studies, the instruments should still measure as intended.

Fifth, data should be *collected in-person* as much as possible to overcome the data bias inherent from unreturned forms. The author went to Brazil for seven weeks and travelled to seventeen major or smaller cities<sup>10</sup> to meet with missionaries, interview them, and give instructions on filling out the forms. As described earlier, attempt at personal data collection was frustrated by logistical difficulties of travel, by communication difficulties with mission leadership in one particular mission, by willingness of missionaries to fill out forms, and by time constraints. For example, New Tribes (NTM) missionaries are scattered throughout Brazil in isolated Indian tribes, where planes go in only once a month, and with travel restrictions imposed by the Brazilian government, so data collection in person from these sites was not economically or practically possible. A special sheet of instructions was prepared for missionaries with New Tribes, and was included with the main questionnaire, the cross-check instruments, and return envelopes to ensure confidentiality. These were sent out by plane, received by NTM headquarters a month or two later on, and forwarded by mail to Canada from the two mission centres in Brazil. Return from New Tribes missionaries was 23 out of 53 (43.4%) for the missionary questionnaire and 17 out of 53 (32.07%) return from missionary colleagues. It is clear that personal data collection, in this instance, did not necessarily reduce the data bias inherent in unreturned forms.

While CIDA combinations of types of scales, behavioural items, attitudinal items, and varieties of format were largely retained in the field questionnaires, in an attempt to more

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<sup>9</sup> Allowance has been made for identifying these in the study to recognize the skew they might cause.

<sup>10</sup> These included Manaus, Santarem, Belém, São Luís, Fortaleza, Natal, Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo, Campinas, Curitiba, Florianopolis, Porto Alegre, Brasília, and Anápolis.



precisely measure competence the CIDA scales were augmented by further questionnaires. For example, the CIDA questionnaire asks only one question on language, “To what extent do you speak and understand the common working language of this country?”<sup>11</sup> while this study also includes the FSI scale utilized by the American Foreign Service Institute (FSI) and adapted by Brewster and Brewster. Some instruments were developed and included to measure process-in-time acculturation because the CIDA study’s focus was more on adaptation than acculturation, while others were developed to measure the effects of prior education and training which was not primarily a focus of the CIDA study.

Sixth, criteria should be *factor analysed* to determine which factors are significant. This is a common procedure, and is undertaken in this study. Seventh, differentiated criteria must be *validated by correlation* with a provisional measure of success. Unlike studies which focused on adaptation or adjustment of short-term “sojourners” and therefore were able to make comparison between those who finished their “term” on the field and early-returnees, this study was not able to make such a comparative study. Rather, the provisional measure of success will be the “perceived measure of competence” provided by nationals and colleagues. Eighth, *correlation of criteria and predictor data* must be undertaken with adequate statistical procedures, such as Pearson’s *r*, multiple regression, *t*-tests, analysis of variance (ANOVA), and extreme group analysis. Most of these types of procedures were undertaken in this study as well.

### **The Sample**

Brazil was chosen as the field from which the sample would be taken because it has one of the largest populations of evangelical missionaries of any one country in the world. To reduce confounding variables as much as possible, one country and culture (though its vastness means there will be regional differences) with one language (though some missionaries worked with both an Indian language as well as Portuguese) was deemed preferable to a range of countries. Three independent missions were chosen as well as one each from the three North American evangelical “umbrella” organizations: the Interdenominational Foreign Missions Association (IFMA), the Evangelical Foreign Missions Association (EFMA), and the Fellowship of Overseas Missions (FOM). These missions included: New Tribes Mission (NTM), Southern Baptist Foreign Mission Board (SBFMB), UFM International, Christian Missions to Many Lands (CMML), Association of Baptists for World Evangelism (ABWE), and the Christian and Missionary Alliance (C&MA). Evangelical missions in Brazil were chosen on the basis of differences in their pre-field training and candidate requirements. Total numbers of on-field missionaries with each mission *in all of Brazil* differ greatly, from fewer than 15 with the CMML to several hundred

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<sup>11</sup> 5-point Likert-scale from “completely” to “hardly at all.”

with New Tribes, the Southern Baptists, and the Association of Baptists for World Evangelism (ABWE) each.

The sample was derived from the missionary population of New Tribes in north-east and north-west Brazil and of five missions located in seventeen cities from Manaus east and down the coast to the southern-most state in Brazil, including the capital Brasília and the city of Anápolis (headquarters for New Tribes Mission East). Permission was obtained from both North American headquarters and field headquarters (if there was one) for each of the missions to undertake the study. Participation in the study was fully voluntary. Only a few declined openly; the others who declined did so by not returning the forms. Findings on specific missions and individuals is fully confidential. A numbering system was employed thereby avoiding the use of individual's names. The identification of each person's mission was retained for comparative purposes.

### **General Characteristics**

Detailed characteristics of the sample are given in Table 10. The largest block comes from ABWE, followed by Southern Baptist and New Tribes. Over half of the sample is composed of Baptists (53.7%). There is a perfect numerical balance between men and women. This group is mature: 64.2% of the sample is between the ages of 30 and 50 with another 30% between 50 and 60 years of age. The vast majority (85.8%) are American citizens, while the same percentage are married to North Americans (85.8%). The majority are also conservative, coming from country, small town, or suburban backgrounds (84.2%) and from politically conservative families (86.7%) which are moderately well educated (74.2%), probably lower middle class. Missionaries were raised in families that tended to be very or moderately close (85%), involving the children in family activities (68.3%), and giving moderate discipline (87.5%), though it is surprising how many identified themselves as being ignored or forced to be independent and find their support out of the home (30.77%). English is the maternal language for 95.8% of the sample.

Frequency distribution shows number of years of service in Brazil as bimodal, first term (1-4 years) and sixth term or later (25+ years) having the highest percentages (24.2% and 25.8%) respectively. The next highest percentage rests in the second term (15%), followed by fourth term (12.5%) and fifth term (11.7%). The spread is nicely balanced for a study on "process-in-time" acculturation! The majority work in suburban or urban areas (65.9%) and one quarter (25.8%) work in rural or jungle areas.



Table 9: General Characteristics of the Sample

Mission Sample Size (n=120)			Sex (n=120)		
Group	Count	%	Group	Count	%
ABWE	37	30.6	Female	60	50.0
C&MA	15	12.4	Male	60	50.0
CMML	6	5.0			
New Tribes	22	18.2			
S. Baptist	28	23.1			
UFM	12	9.9			
Age (n=120)			Nationality (n=120)		
Group	Count	%	Group	Count	%
< 20	1	0.8	American	103	85.8
20-29	6	5.0	Canadian	11	9.2
30-39	41	34.2	Other <sup>12</sup>	6	5.0
40-49	36	30.0			
50-59	27	22.5			
60 >	9	7.5			
Marital Status (n=120)			Maternal Language (n=120)		
Group	No.	%	Group	Count	%
Married to N.Am.	103	85.8	English	115	95.8
Married to National	1	0.8	Portuguese	3	2.5
Single	13	10.8	Other	2	1.7
Widow/Widower	1	0.8			
Other <sup>13</sup>	2	1.7			
Childhood Residence Sites <sup>14</sup> (n=120)			Family Political Orientation (n=120)		
Group	Count	%	Group	Count	%
Farm. Comm.	32	26.7	Conservative	104	86.7
Small town	41	34.2	Liberal	4	3.3
City Suburbs	28	23.3	Neither	12	10.0
Inner City	8	6.7			
Other	11	9.2			
Family Educational Level (n=120)			Relationships in the Family When Growing Up (n=120)		
Group	Count	%	Group	Count	%
Poorly educated	11	9.2	Close	46	38.3
Moderately educated	89	74.2	Fairly good	56	46.7
Well educated	20	16.7	Tense	17	14.2
			Very tense	1	0.8

<sup>12</sup>Germans, Dutch, and Australians married to American or Canadian citizens.  
<sup>13</sup>Married to a British citizen.  
<sup>14</sup>This is where the majority of time was spent in the critical formative years prior to 20 years of age.

Discipline Standards When Growing Up (n=120)			Involvement in Family Activities When Growing Up (n=119; 1-no answer)		
Group	Count	%	Group	Count	%
Harsh	10	8.3	Deeply Included	82	68.3
Moderate	105	87.5	Made to be Independent	16	13.3
Lax	5	4.2	Ignored	2	1.7
			Expected to be Out of Home	19	15.8
Number of Years on the Field as a Missionary (n=120)			Present Work Setting (n=120)		
Group	Count	%	Group	Count	%
1-4	29	24.2	Jungle	22	18.3
5-9	18	15.0	Rural	9	7.5
10-14	13	10.8	Suburban	26	21.7
15-19	15	12.5	Urban/Inner	53	44.2
20-24	14	11.7	Other	10	8.3
25 +	31	25.8			

Surprisingly only 68.3% identified themselves as working with a Brazilian counterpart (co-worker). Nor is this entirely a function of in-home/out-of-home work (ie. women who are homemakers and support their husbands in that sense). A contingency table indicates gender is not particularly a critical criterion, as only eight women fewer than men were without a Brazilian co-worker.

Table 10: Contingency Table--Gender:Brazilian Counterpart

Presently working with Brazilian Counterpart? (n=120)			Contingency Table Gender--Brazilian Counterpart (n=120)			
Group	Count	%		Female	Male	Total
No	38	30.8	No counterpt	23	15	38
Yes	82	68.3	Counterpart	36	46	82
			Totals	59	61	120
			<i>Columns are levels of Sex</i>			
			<i>Rows are levels of Brazilian Counterpart</i>			

This indicates that 33.7% of missionaries polled do not appear to be involved in co-functional (missionary-national) ministry development with the “transfer-of-skills” through discipleship or leadership-development inherent in that type of close relationship!

**Educational Characteristics**

Table 11 gives the frequency breakdown of the sample’s general educational background. Seven (5.8%) had not had high school but five of these had been on the field for 25 years or more. Four of the seven are women and three men. The largest number had received theological education through Bible School/College or Seminary (75.2). This



suggests that the other 24.8% received whatever these missions require as a minimum in theological training (usually 36 semester credit hours of Bible/Theology). One-tenth (10.7%) had received more than one seminary degree, while more than a quarter had a university degree (28.1%) with 6.61% having earned more than one university degree. While 61.51% (74 individuals) had a bachelor's degree, only 27.25% (30) had higher than a bachelors degree. Most of the 22 from New Tribes Mission may have gone to one of the New Tribes 3-year Bible Schools which do not grant degrees. CMML does not require Bible College or Seminary, yet five of the six have had Bible College. The surprise is the Southern Baptists with only 11 out of 28 having had Bible College and/or Seminary. This may be a result of questionnaire return patterns. Those with less education may have returned forms better than those with more education. If so, the results may be somewhat skewed.

Table 11: General Educational Backgrounds of the Sample

1. Educational Level (n=120)

	Education Level	Count	Percentage
a.	High School.....	113	94.16
b.	Technical School.....	9	7.44
c.	Community College .....	3	2.48
d.	Bible College/Bible School.....	65	54.16
e.	One Seminary Degree.....	26	21.50
f.	More than one Seminary Degree.....	13	10.70
g.	One University Degree .....	34	28.10
h.	More than One University Degree .....	8	6.61
i.	Other .....	29	24.00

2. Degrees Earned

	Degree Level	Count	Percentage
a.	B.A.....	48	40.00
b.	B. Sc. ....	18	14.90
c.	B.Th. (equivalent to B.Div.) .....	2	1.65
d.	B.R.E. ....	6	4.96
e.	M.A. ....	4	3.31
f.	M.Div.....	16	13.20
g.	M.Th. or Th.M.....	5	4.13
h.	M.R.E. ....	5	4.13
i.	Doctorates (Ph.D.-3, D.Ed.-2, D.Min.-5,D.Miss.-1,D.M.A.-1) .....	12	9.00
j.	Other degrees.....	12	9.00
	Totals:.....	129	106.66% <sup>15</sup>

Following is a table depicting the numbers from each mission who have had Bible College and/or Seminary theological training. Note that 8.26% are currently working on a degree.

<sup>15</sup>Not all respondents have a degree but of those who do a significant number have more than one degree. This is the reason for the high number and percentage, both of which are not based on the entire sample but only on the sample of those who have degrees.

Table 12: Contingency Table--Theological Education of Missionaries (n=120)

	<u>ABWE</u>	<u>C&amp;MA</u>	<u>CMML</u>	<u>New Tribes</u>	<u>S.Bapt.</u>	<u>UFM</u>	Total
Bible College	20	13	5	16	1	9	65
1 Sem. Degree	7	7	0	0	10	2	26
2 Sem. Degrees	3	0	0	0	9	1	13

Columns are Missions  
Rows are Bible Colleges and Seminaries  
Those with two seminary degrees have identified themselves also under “1 seminary degree” and/or “Bible College” so there is duplication here.

It is interesting to note, in light of complaints that some mission leaders have expressed about the lack of evident evangelistic skills in new missionaries (see Chapter One), 61.2% of the sample identified their training to be for evangelism. This is followed by Christian Education (53.3%), Education/Training (50%), Church-planting (41.3%), and Pastoral Ministry (38%) as the dominant ministries. A quarter (25.6%) had been prepared for music ministry and a fifth (20.7%) for translation work (15 of the 22 New Tribes missionaries had been prepared for this showing their specialist nature). Total count equals 457 since missionaries identified prior education to be multi-directional in training emphasis.

TABLE 13: Specific Ministries Missionaries Were Trained For (n=120)

Ministry	Count	Percentage
a. Pastoral Ministry .....	45	37.5
b. Music Ministry .....	31	25.6
c. Christian Education .....	64	53.33
d. Christian Camping.....	23	19.0
e. Education/Teaching.....	60	50.0
f. Administration.....	21	17.4
g. Accounting/Financial Management .....	14	11.6
h. Medical .....	15	19.7
i. Agriculture .....	11	9.09
j. Technical: Engineering, Electronics, etc. ....	11	9.09
k. Translation.....	25	20.7
l. Evangelism .....	74	61.2
m. Church-planting.....	50	41.3
n. Other .....	13	10.7

Pre-field Training Experiences

Table 14 gives frequencies of types of pre-field training experienced by the sample. Fewer than half (41.3%) had travelled outside of continental North America before going to Brazil, so it was a new experience for most. The majority of respondents (90.1%) identified Candidate School or some type of pre-field training to have been required.<sup>16</sup> A sizeable 43%

<sup>16</sup>Of the 22 (9.92%) who identified no pre-field training or candidate school the majority had been on the field 15 years or longer and may have forgotten or at the time of their candidacy such was



identified a required “bootcamp” pre-field or on-field experience.<sup>17</sup> Three individuals served an internship in an ethnic context before going to Brazil, and 26 (21.5%) had a church-based internship.

Table 14: General Pre-Field Training Experiences of the Sample (n=120)

<u>Prior Overseas Travel Experiences</u>			<u>Reasons for Travel</u>		
Group	Count	%	Group	Count	%
No	71	59.17	Military	3	2.48
Yes	49	40.83	Missionary	15	12.40
			Business	1	0.83
			Tourist	24	20.70
			Other	9	7.44

<u>Church Internship Required?</u>			<u>Ethnic Min. Intern. Required?</u>		
Group	Count	%	Group	Count	%
No	94	78.33	No	117	97.50
Yes	26	21.67	Yes	3	2.48

<u>“Bootcamp” Experience Required?</u>			<u>Candidate School Required?</u>		
Group	Count	%	Group	Count	%
No	69	57.00	No	12	9.90
Yes	52	43.00	Yes	109	90.10

Various service organizations exist to provide pre-field and post-field training and counselling services for missions and missionaries. Table 15 identifies percentages of the approximately one third (35.3%) of respondees who utilized external pre-field programs.

Table 15: External Pre-field Training Organizations Utilized (n=120)

Organization	Count	Percentage
MI <sup>18</sup> Pre-field Orientation (PFO).....	4	3.31
MI Program in Language Acquisition Techniques (PILAT).....	2	1.65
MI Culture and Language Orientation (CLO).....	5	4.13
MI Church-based Internship .....	5	4.13
MI Urban-based (Ethnic) Internship.....	1	0.83
MI Other .....	3	2.48
Link Care <sup>19</sup> Candidate Assessment Program (CAP) .....	8	6.61

not available or required. CMML does not have candidate school since it acts only as a service agency to missionaries on the field, not as a sending agency.

<sup>17</sup>It would appear that most respondents identified “boot camp” with candidate school as a result of the unfortunate placement of the two questions: “Did you have a “bootcamp” pre-field or on - field training experience?” followed immediately by “How long was your candidate or pre-field training?” New Tribes Mission has an 18 months pre-field training which they refer to as “bootcamp.” The other missions do not.

<sup>18</sup>MI - Missionary Internship, a training organization located in Farmington, Illinois.

<sup>19</sup>Link Care is a service organization to missionaries located in Los Angeles, California offering psychological assessment services, pre-field orientation, ministries and counselling to “missionary kids” (MKs), and counselling care to troubled missionaries.

Table 15: External Pre-field Training Organizations Utilized Con't

Link Care Cross-Cultural Learning Center (CLC) .....	1	0.83
Link Care other services .....	5	4.13
Toronto Institute of Linguistics .....	2	1.65
Summer Institute of Linguistics <sup>20</sup> .....	4	3.31
Mission and Training Resource Center.....	2	1.65
Operation Mobilization Summer program.....	1	0.83
<b>TOTAL .....</b>	<b>43</b>	<b>35.53 %<sup>21</sup></b>

“Current” Ministries

The sample identified the following as “current” ministries. Church-planting, as the most commonly identified (total count 44), was also closely related to evangelism (count 17) and discipling/teaching new believers (13). Church-related ministries included pastoral work (6), “church enrichment” (2), Christian education (11), camp ministry (5), music (also used for evangelism) (12), youth/children’s ministries (6), women’s ministries (6), and counseling (4). Formal education ministries included teaching theology or religious education in a seminary (15), librarianship (2), general teaching (3), teaching literacy (3), being dorm parents or teaching in a school for missionaries’ children (3), and running a Christian bookstore (2). Mission-related ministries included administration (11),<sup>22</sup> secretarial (2), accounting/financial management (4), medical (7), translation of the Bible into tribal languages (4), maintenance/construction/mechanics (10), “social ministries (2), and radio program development (1). Two identified themselves as primarily involved in language and culture learning because only into their second year on the field. Eleven identified their primary ministry as “home-making”--being wife and mother. Many in the sample had multiple ministries and as such were included in multiple counts.

On-Field and Furlough Training Experiences

Very few missionaries were trained on-field through the use of mentors. Thirteen (10.7% of the sample) were mentored by fellow missionaries while only three (2.48%) made effort to be mentored by nationals! Language was most prominently learned through schools specializing in teaching Portuguese. It is interesting that over 30% identified the use of field language learning methods (such as LAMP and BALL) or informal, self-directed learning methods.

<sup>20</sup>Summer Institute of Linguistics is the technical linguistics arm of Wycliffe Bible Translators.

<sup>21</sup> Since MI and Link Care programs appear more than once, final sample total of those utilizing external pre-field training may actually be lower since the same individuals may have taken more than one course in each program.

<sup>22</sup>Though some of these were administrators in seminaries, most were administrators in mission work.



Table 16: Types of Language Learning

Group	Count	%
Lang.School	94	77.70
Lang.in University	4	3.31
Field Lrng. (LAMP)	13	10.70
Self-Taught	25	20.70
Other	29	24.00
Total	165	136.4 <sup>23</sup>

Some type of furlough learning experiences (even if only as short as a five-day workshop) seems to have been true for the majority (94.99%). Interestingly, there was considerable disagreement among missionaries from five of the seven missions on whether there was a *policy* requiring continuing education, and whether *funding* and the *time* needed for study was made available by mission administrators.

Table 17: Continuing Education on Furlough

Organization	Count	Percentage
Bible College or Seminary for degree .....	15	12.40
Bible College or Seminary for enrichment courses.....	14	11.60
MI <sup>24</sup> Missionary Furlough Program (MFP).....	13	10.70
MI Missionary Kids Orientation <sup>25</sup> .....	2	1.65
MI Continuing Education for Missionaries (Workshop).....	15	12.40
MI Mission Leaders Workshop .....	4	3.31
Mission Training and Resource Center (MTRC) .....	5	4.13
Link Care Furlough Evaluation Program .....	1	0.83
Link Care Restoration/Personal Growth Program.....	1	0.83
Link Care Re-Entry Program.....	1	0.83
Link Care M.K. Program <sup>26</sup> .....	1	0.83
Church-sponsored Training Programs.....	17	14.00
Other Training.....	26	21.50
TOTAL .....	115 <sup>27</sup>	94.99

Also interesting is the perception of missionaries on the extent to which their formal (graduate or post-graduate) studies have been profitable to field ministry . (See Table 18). Assuming that the 84 (69.4%) who gave “no answer” to the question of the value of their graduate or post-graduate studies have not undertaken such studies, 12 (32.43% out of the remaining 37) found their studies to be “exactly as needed,” while nearly twice that number, 20 (54.05% out of the 37) identified them as merely “helpful.”

<sup>23</sup>Total is higher than 100% because more than one field language-learning approach was used.

<sup>24</sup>MI - Missionary Internship, a training organization located in Farmington, Illinois.

<sup>25</sup>This is a program to help missionaries’ children to make a smooth transition to North American living and to help them work through the psychological effects of the “missionary kid syndrome,” a type of culture shock resulting from a sense of rootlessness.

<sup>26</sup>A re-entry program for missionaries’ children similar to that offered by Missionary Internship.

<sup>27</sup>This total and percentage are again high for the number that take opportunity to continue education during furlough and represents multiple involvements on the part of some missionaries.

Table 18: Educational Value / Opportunities Taken for Continuing Education

<u>Value of Formal Education</u>			<u>Taking Training Opportunities?</u>		
Group	Count	%	Group	Count	%
exactly needed	12	9.92	full advantage	23	19.00
helpful	20	16.50	some	63	52.10
short of needs	3	2.48	little	20	16.50
uncertain	2	1.65	uncertain	11	9.09
no answer	84	69.40	no answer	4	3.31

Perhaps of greater interest is the extent to which missionaries are taking advantage of educational resources and opportunities offered by missions to develop themselves and their ministries.<sup>28</sup> Only 19% were taking “full advantage” and 54% taking some advantage.

To measure growth in their lives, missionaries were asked to rate themselves<sup>29</sup> positively (+) or negatively (-) on their growth along 10 dimensions: *intellectual, spiritual, emotional, interpersonal skills, marital relationship, relationship with children, communication skills, feelings of self-confidence, feelings of independence, and political development*. Table 19 gives the breakdown.

Table 19: Self-Rated Personal Growth

<u>Intellectual Development</u>			<u>Spiritual Development</u>		
Group	Count	%	Group	Count	%
+Very Much	15	12.40	+Very Much	23	19.00
+Much	39	32.20	+Much	61	50.40
+Some	50	41.30	+Some	30	24.80
+Little	11	9.09	+Little	3	2.48
+Very Little	2	1.65	-Much	1	0.83
-Very Much	1	0.83	-Some	1	0.83
Uncertain	3	2.48	-Little	1	0.83
			-Very Little	1	0.83

<sup>28</sup>The following are the resources identified by respondents of continuing education opportunities available to missionaries on their field by their missions.

Continuing Education Opportunity	Count	Percentage
Annual Field Conferences.....	91	75.2
Enrichment courses offered by missions .....	28	23.1
Enrichment courses offered by external agencies.....	43	35.5
“Books and journals” reading programs .....	50	41.3
Audio and video tape library.....	40	33.1
Self-study materials .....	75	62.0
Consultation for missionaries in areas of ministry.....	51	42.1
Occasional workshops on ministry each year .....	25	20.7
“On-the-job” training by skilled practitioners .....	32	26.4
Training of new missionaries by veterans .....	30	24.8
Other training/educational opportunities .....	6	4.96

<sup>29</sup>Section II, Personal Development, Part I: Personal Growth, p. 11. See Appendix 1.



**Emotional Development**

Group	Count	%
+Very Much	9	7.44
+Much	44	36.40
+Some	40	33.10
+Little	5	4.13
+Very Little	5	4.13
-Very Much	2	1.65
-Much	3	2.48
-Some	6	4.96
-Little	2	1.65
-Very Little	1	0.83
Uncertain	4	3.31

**Interpersonal Development**

Group	Count	%
+Very Much	10	8.26
+Much	45	37.20
+Some	55	45.50
+Little	5	4.13
-Some	2	1.65
Uncertain	4	3.31

**Marital Relationship Development**

Group	Count	%
+Very Much	13	10.70
+Much	48	39.70
+Some	35	28.90
+Little	4	3.31
+Very Little	1	0.83
-Very Much	1	0.83
-Some	2	1.65
-Little	3	2.48
Uncertain	6	4.96
N/A	8	6.61

**Relationship Dev. w/Children**

Group	Count	%
+Very Much	9	7.44
+Much	49	40.50
+Some	33	27.30
+Little	9	7.44
+Very Little	2	1.65
-Some	1	0.83
-Little	2	1.65
-Very Little	1	0.83
Uncertain	5	4.13
N/A	10	8.26

**Communication Skills Development**

Group	Count	%
+Very Much	20	16.50
+Much	39	32.20
+Some	45	37.20
+Little	8	6.61
+Very Little	2	1.65
-Little	1	0.83
-Very Little	1	0.83
Uncertain	5	4.13

**Development of Confidence**

Group	Count	%
+Very Much	12	9.92
+Much	35	28.90
+Some	43	35.50
+Little	13	10.70
+Very Little	2	1.65
-Very Much	1	0.83
-Much	1	0.83
-Some	7	5.79
-Little	3	2.48
-Very Little	3	2.48
Uncertain	1	0.83

**Feelings of Independence/Control**

Group	Count	%
+Very Much	9	7.44
+Much	29	24.00
+Some	46	38.00
+Little	14	11.60
+Very Little	4	3.31
-Very Much	1	0.83
-Much	4	3.31
-Some	5	4.13
-Little	3	2.48
Uncertain	5	4.13
N/A	1	0.83

**Political Opinions**

Group	Count	%
+Very Much	6	4.96
+Much	16	13.20
+Some	21	17.40
+Little	19	15.70
+Very Little	25	20.70
-Some	1	0.83
-Very Little	5	4.13
Uncertain	28	23.16

While 44.6% rated “much” or “very much” intellectual development, a full 55.35% rated growth from “some” to *negative* growth. Spiritual growth fared better with 69.4% at “much” or “very much.” However, a few experienced perceived spiritual declension (7 at 5.78%). Emotional development rated “much” or “very much” for 43.84% but worrying are the numbers who experienced little or negative emotional development (“+little” to “-little”, 19.82%). A few appear to rate themselves as actually having experienced emotional damage, (7 for 5.78% at “-much” or “-very much”).

Generally, interpersonal development is high, with 45.56% at “much” or “very much” and 45.2% at “some.” However, probably at unacceptable levels, *negative marital development* stands at 14.05% while *negative* development in relationship with children stands even higher at 16.52% (both from “+little” to “uncertain”). Over half (51.42%) rated their communication skills poorly--from “some development” to negative development. A quarter (25.57%) rated development of confidence from “little” to negative, or loss of confidence. Finally, 29.78% rated their feelings of control and independence poorly, from “little” to loss of independence and control. *Overall analysis, though, is of a psychologically and relationally strong group of missionaries.*

### **The Instruments**

Six categories of instruments were developed: 1) self-ratings, 2) North American colleague ratings, 3) Brazilian co-worker ratings, 4) questionnaires to Personnel Directors or Candidate Secretaries of the various missions, 5) questionnaires to pre-field or on-field trainers from these same missions, and 6) questionnaires to 135 Bible Colleges and Seminaries in Canada and the United States. The latter three questionnaires were designed to get a larger perception of academic requirements in the selection processes and the role of academic theological institutions in preparing missionaries. *Due to the volume of data derived from the first three questionnaires, analysis of the latter three questionnaires will not be included in this document.* Copies of the three field-based questionnaires are included in appendices 1-3. Table 20 on the next page summarizes the instruments.



Table 20: Summary of Instruments

Instrument	Source of Measurement	Variable	# of Items	Variable Class
<b>FORM 1</b>	<b>SELF-REPORT</b>			
Section 1		General and Educational Information	141	
Section 2/1		Personal Development: Personal Growth	10	Independent
Section 2/2		Personal Development: Ministry Growth	7	Dependent
Section 3		Language-Speaking Proficiency	4	Dependent
Section 4/A		Acculturation	61	Dependent
Section 4/B		Contextualization of Work	21	Dependent
Section 5		Spiritual Dimensions	42	Independent
Section 6/1		Adjustment	5	Dependent
Section 6/2		Personal Expectations	13	Independent
Section 6/3		Personal Satisfaction	7	Dependent
Section 6/4		Personal Dimensions	44	Independent
Section 6/5		Social Dimensions	32	Dependent
Section 7		Work Difficulty and Support Structure	94	Moderator
<b>FORM 2</b>	<b>COLLEAGUE-RATINGS</b>	Descriptive Statements 1-13	13	Independent
		Descriptive Statements 14-21	8	Dependent
<b>FORM 3</b>	<b>NATIONAL-RATINGS</b>			
Part 1		Missionary Adjustment	5	Dependent
Part 2		Acculturation/Contextualization of Work	22	Dependent
Part 2		Spiritual Dynamics (Question 23)	1	Independent
<b>PD/CS FORM</b>	<b>QUESTIONNAIRE</b>			
Part 1		Mission Demographics	59	
Part 2		Missionary Selection	108	
Part 3		Training of Missionaries	32	
Part 4		Continuing Education of Missionaries	45	
<b>MISSION TRAINERS</b>	<b>QUESTIONNAIRE</b>			
Part 1		Mission Demographics and Training Requirements	21	
Part 2		Philosophy of Training	21	
Part 3		Design of Training	52	
Part 4/1		Content of Training: Objectives	65	
Part 4/2		Content of Training: Training Design	55	
<b>COLLEGE FORM</b>	<b>QUESTIONNAIRE</b>			
Part 1		College/Seminary Demographics	7	
Part 2/1		Philosophy of Education: Objectives	80	
Part 2/2		Philosophy of Education: Design	35	
Part 3		Content of Missiological Education	155	

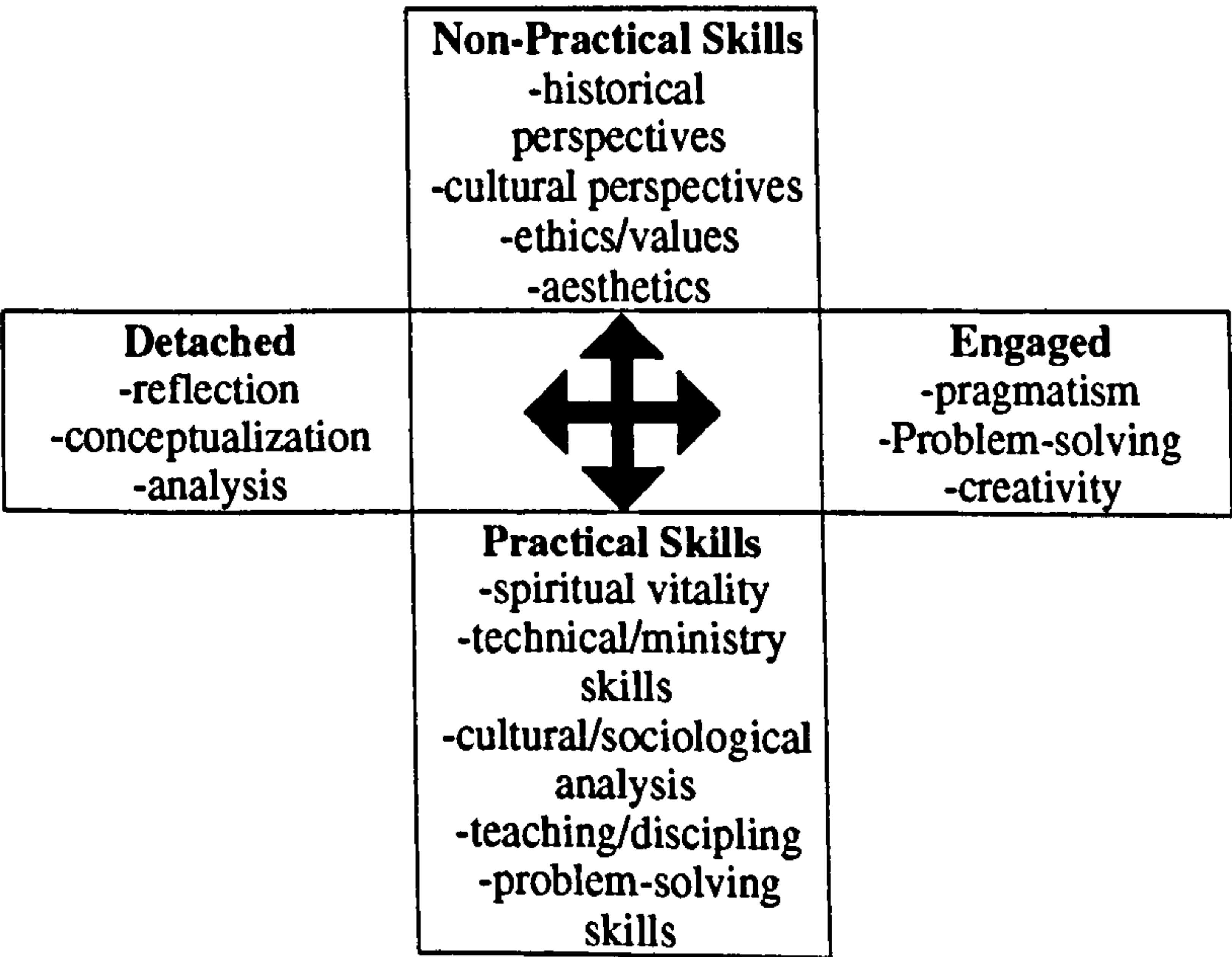
### Dependent Variables

Dependent variables, also sometimes called “criterion” variables, are those that *measure cross-cultural success* or effectiveness. Because this study is concerned with missionary success and competence, the study had to be designed with variables that measure aspects of success related to the work of missionaries. And because competence has been operationalized to mean not only self-perceived abilities and skills, but also that perceived by others as competence, criterion variables had to be designed into questionnaires that

colleagues and national co-workers could fill out on the sample respondents. The following are descriptions of the dependent variable forms.

1. **Personal Development: Ministry Growth** (Form 1, Section 2/2). Subjects rated themselves on their abilities for the missionary task along 7 dimensions: growing Biblical/theological knowledge for the task, skills in applying that knowledge to ministry, developing gifts and skills necessary, ability to work with others complementarily, ability to assess the cultural, religious, and political context of the work, ability to utilize the research of others for the task, and ability to formulate and apply credible and workable strategies. This is a new questionnaire based on a model suggested by Logan for higher education. Logan iterated that an adequate breadth of education for competent life and work necessarily includes 1) knowledge of subject matter, 2) ability to utilize the research and findings of others, 3) ability to understand the historical, cultural, philosophical, political, etc. context of one’s situation, 4) necessary life and work skills, and 5) creativity.<sup>30</sup> He developed a “quadropole” with four interactive components: non-practical skills, practical skills, detached reflection, and engaged creativity. Figure 14 shows the quadropole adapted by this author to ministry training.

**Figure 14: Logan’s Adapted Quadropole**

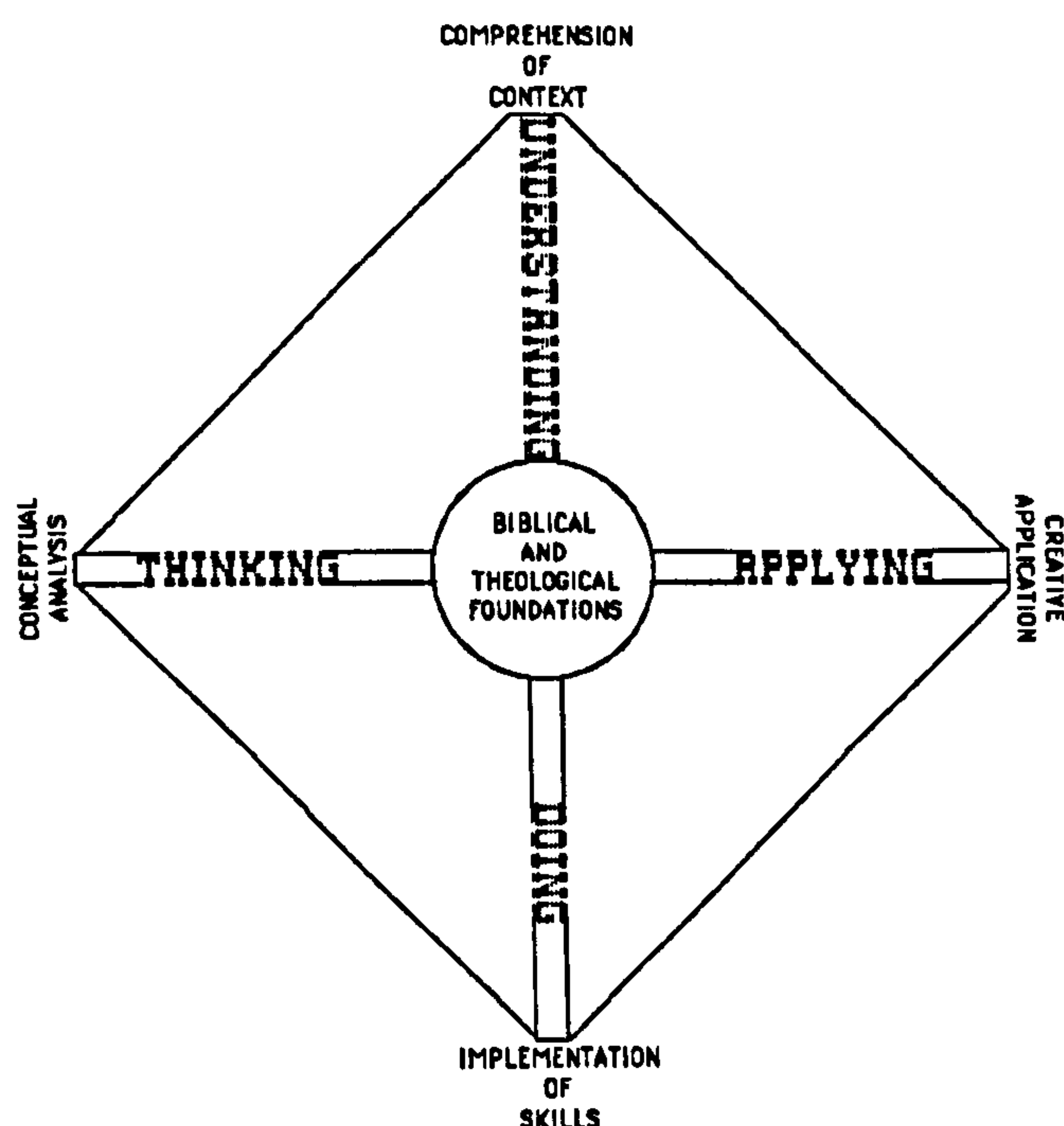


<sup>30</sup>R.D. Logan, "Bridging the Traditional and Non-Traditional: A Model for Higher Education," *Liberal Education* 69 (1983): pp. 233-243.



Figure 15 illustrated the components further developed by this author for ministerial and missiological education.<sup>31</sup>

**Figure 15: Logan's Model Developed for Missiological Education**



2. **Language Speaking Proficiency** (Section 3). Based on the rating developed by the Foreign Service Institute, Washington, D.C. and modified by Brewster and Brewster,<sup>32</sup> this is a five-point that more precisely identifies the speaking/listening proficiency of an individual. See Table 21 (next page) for description of each level on pronunciation, grammar, vocabulary, fluency, and comprehension. Two questions are also asked on goals for continued language learning and sensed rate of progress in language learning.
3. **Acculturation** (Section 4, Part 1). This also is a new scale developed by the author to measure the extent to which missionaries have become acculturated along cognitive, affective, and behavioural dimensions, utilizing the taxonomy suggested by Everett Kleinjans<sup>33</sup> integrated with dimensions of culture suggested by cultural anthropology. Kleinjans' taxonomy delineates the increased development of cognition from information to insight, of affection from perception to identification, and of action from

<sup>31</sup>This diagram is both descriptive of and used as part of the framework of the philosophy of education developed for Prairie Graduate School, Three Hills, Alberta, Canada. To see how a three-fold graduate-level training scheme (formal academic, personal development, and field ministry skills development) has been further structured on this framework by this author see Appendix 4.

<sup>32</sup>E. Thomas Brewster and Elizabeth S. Brewster, Language Acquisition Made Practical, (Colorado Springs, CO: Lingua House, 1976), pp. 374-377.

<sup>33</sup>Everett Kleinjans, "On Culture Learning," (Honolulu: East-West Culture Learning Institute, 1972, pp. 20-25.

Table 21: SFI Rating of Speaking/Listening Proficiency Along Five Factors

Factors	S - 1	S - 2	S - 3	S - 4	S - 5
Pronunciation	Often unintelligible	Usually foreign but rarely unintelligible	Sometime foreign but always intelligible	Sometime foreign but always intelligible	Native
Grammar	Accuracy limited to set expressions; almost no control of syntax; often conveys wrong information	Fair control of most basic syntactic patterns; conveys meaning accurately in simple sentences most of the time.	Good control of most basic syntactic patterns; always conveys meaning accurately in reasonably complex sentences.	Makes only occasional errors, and these show no pattern of deficiency	Control equal to that of an educated native speaker
Vocabulary	Adequate only for survival, travel, and basic courtesy needs	Adequate for simple social conversation and routine job needs	Adequate for participation in all general conversational and for professional discussions in a special field	Professional and general vocabulary broad and precise, appropriate to the occasion	Equal to vocabulary of an education native speaker
Fluency	Except for memorised expressions, every utterance requires enormous, obvious effort	Usually hesitant; often forced to silence by limitations of grammar and vocabulary	Rarely hesitant; always able to sustain conversation through circumlocutions	Speech on all professional matters as apparently effortless as English; always easy to listen to	Speech at least as fluent and effortless as in English on all occasions
Comprehension	May require much repetition, slow rate of speech; understands only very simple, short, familiar utterances	In general understands non-technical speech directed to him, but sometimes misinterprets or needs utterances repeated or reworded. Usually cannot follow conversation between native speakers.	Understands most of what is said to him; can follow speeches, clear radio broadcasts, and most conversations between native speakers, but not in great detail	Can understand all educated speech in any moderately clear context; occasionally baffled by colloquialisms and regionalisms	Equal to that of the native speaker



awareness to interacting (Table 22). This scale was pre-tested on 45 missionaries from five missions working among North American Indians in Alberta and Saskatchewan, Canada. Regression analysis indicated that each variable was adequately distinct from the others and therefore presumably effectively measured the dimensions.

**Table 22: Taxonomy of Culture-Learning Levels <sup>34</sup>**

<b>Cognition</b>	<b>Affection</b>	<b>Action</b>
Information	Perception	Awareness
Analysis	Appreciation	Attending
Synthesis	Revaluation	Responding
Comprehension	Orientation	Acting
Insight	Identification	Interacting

The Acculturation Scale measures *cognition* beginning with factual knowledge along 10 dimensions of culture, followed by understanding of the implications of those dimensions, followed by insight into the impact of those dimensions on cultural behaviour. *Affective* development is measured first with appreciation followed by identification with and acceptance of 10 dimensions of cultural behaviour. *Behavioural* development questions cover all aspects of the “action” taxonomy above but only on a

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<sup>34</sup>Kleinjans operationalized each level in the taxonomy in this way:

1. Information: the storing of facts about a culture which a person may acquire and recall from memory at will.
2. Analysis: the process of sorting all this information out into potentially useful categories.
3. Synthesis: filling the analyzed facts into an organized structure, and seeing relationships. This is a major point in culture learning for it enables one to see the coherence of cultural patterns.
4. Comprehension: the ability to see patterns which "explain" behaviour. This suggests the ability to see the large scope and the ability to extrapolate or predict. A person who comprehends a culture can sense or explain how some new act or event fits coherently into the overall structure of that culture. This level means one is able to read cultural clues. He is beginning to develop "intuition" about a culture.
5. Insight: the ability to see the culture from the inside. Meanings and basic assumptions of the culture are understood. This level of insight means that one knows the reason why people act as they do; what their motivation is.
6. Perception: sensory awareness of the existence of something. There is actual contact at this point.
7. Appreciation: a generally favourable recognition of and beginning response to aesthetic values within a culture.
8. Revaluation: the process of changing one's own values, either by a shift in priority, giving up old values for new ones, or enlarging one's values. For example, an American replacing a direct confrontational style for the use of a third party in sensitive interpersonal interactions.
9. Orientation: changing the direction of one's life on the basis of values internalized in the revaluation process.
10. Identification: becoming one with the people of the other culture; developing a close emotional relationship so that one cares about them... Identification "feels" a culture from the inside.
11. Awareness: a person recognizes the existence and necessity for certain ministry actions and activities.
12. Attention: a person begins attending to, watching for ministry action.
13. Response: a person begins responding positively to the action.
14. Action: enough confidence has been gained to initiate an action, transaction, or relationship.
15. Interaction: freedom to be involved and interact in almost all social situations.

basic level. The Scale on “contextualization of work” develops the behavioural dimension further.

4. ***Contextualization of Work*** (Section 4, Part 2). This study assumes that the most competent cross-cultural work is that which is contextualized to the extent that it is adopted by the people and functions naturally within their cultural context.<sup>35</sup> The questionnaire on Contextualization of Work adapts and develops ideas used and tested by Janet Metzger in her study on the success/effectiveness of missionaries as cosmological change agents.<sup>36</sup> It measures on eleven dimensions the extent to which missionaries relate to the culture in partnership with nationals along lines critical for developing both ministry and national leaders to the point where a ministry could continue under their leadership.
5. ***Adjustment*** (Section 4, Part 1). Since approximately one-sixth of the sample are in their first four years, the adjustment scale developed by Hawes and Kealey (CIDA, 1979) was utilized. Subjects rated themselves on four questions: degree of personal adjustment, family adjustment, ministry effectiveness, and concern with developing nationals.<sup>37</sup>
6. ***Personal Satisfaction*** (Section 4, Part 3). Subjects rated how they felt about 5 areas of cross-cultural life and ministry: two questions dealing with relationships to missionaries and to nationals, two dealing with quality and development of work, and one each dealing with progress of language and culture learning, health (physical, emotional, mental), and life in general within the culture. Also adapted in part from the CIDA study
7. ***Socialization*** (Section 6, Part 5). Subjects rate themselves on interaction with nationals by identifying numbers of times they attend functions and visit national homes, tensions they experience with nationals on various aspects of ministry, and how developed their skills are for dealing with conflicts. This was a new specially developed series of scales.
8. ***Missionary Colleague-Ratings***. One missionary colleague rated each respondent on the degree to which the statement described the subject’s behaviour, on a 5-point scale. There were eight statements on demonstrated interaction with nationals, acculturation, contextualization, commitment to ministry, concern with training nationals, and ability to formulate and apply credible and workable ministry strategies.

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<sup>35</sup>This definition of competent contextualization assumes that syncretism has not taken place as a consequence but that biblical truth and the correspondent life-style of believers are both biblically sound and culturally adapted.

<sup>36</sup>Janet G. Metzger, "Narration as a Construct for Understanding Third-Culture Building: Exploring Missionaries' Success and Effectiveness as Cosmological Change Agents" (Ph. D., University of Southern California, 1987). See her appendices K and L.

<sup>37</sup>Frank Hawes and Daniel J. Kealey, Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979), see appendix pp. 255-258.



9. **National-Ratings.** Each missionary was rated by a Brazilian national co-worker along two dimensions: 1) five questions that related to *adjustment*: relative degree of adjustment, acculturation, family adjustment, job effectiveness, and concern with training nationals, and 2) 22 questions specific to *acculturation* and *contextualization* of work: verbal and non-verbal communication skills, understanding and enjoyment of the culture, relationships with people, working relationship with Brazilian church leaders, and concern for developing nationals. These ratings were adapted from the CIDA study.

### **Independent Variables**

Independent variables are designed to *predict* the cross-cultural success of individuals in the study. Usually, as predictors, they have to do with traits and characteristics (personal information) about subjects which are likely to effectively predict their success at cross-cultural life and ministry. Most of the independent variables utilized in this study are those that have had prior empirical validation in the Hawes and Kealey (CIDA 1979) and Hopkins' (YFU 1982) studies and adapted to this study. Some new instruments were designed specific to the work done by missionaries and therefore important as potential predictors of missionary success.

1. **Personal Growth** (Section 2, Part 1). This questionnaire was designed on the assumption that competence and success over time are only possible if there is continued growth and development in one's own life. Respondents were asked to evaluate themselves on a five-point Likert scale along ten dimensions<sup>38</sup>: intellectual growth, spiritual development, emotional stability, interpersonal skills development, marital relationship development, development of relationship with children, communication skills development, feelings of self-confidence, feelings of independence/control, and political opinions.
2. **Spiritual Dimensions** (Section 5). If missionary work has to do with spiritual ministry (and it does), the spiritual dimensions of one's life and ministry are then critical predictors of success. There is often a significant gap between the ideal values that individuals hold about spiritual dynamics and the actual values or ways in which they live. This instrument, especially designed for this study, attempts to identify both the ideal and the real values that missionaries hold. Questions were developed from the Beatitudes (Matthew 5:3-12), the "add-to-your-faith" list in II Peter 1:5-7 identified by Peter as essential for success in Christian life (II Pet. 1:8), and from general items commonly recognized as part of Christian life and ministry (such as prayer and

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<sup>38</sup>The questionnaire was developed utilizing ideas suggested by McKee in his study of two missionary teams in Guatemala. Timothy Gene McKee, "A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala," 2 Volumes (D. Ed., Pepperdine University, 1981). See Appendix DD, Section III -- Part 2 - C.

communion with God, study of the Scriptures, the fruit, gifts, and empowering of the Holy Spirit, and “spiritual warfare”). Effort was made to word the questions in such a way that it was not necessarily obvious that they had been derived from these biblical lists.

- 3. *Personal Expectations* (Section 6, Part 2). Subjects rated themselves on expectations they had before going to Brazil on the extent to which they expected to have a positive experience, would have trouble living in the country, would learn the language and make friends, children and spouse would adapt to the children’s education, and how ministry would develop and grow.<sup>39</sup>
- 4. *Personal Characteristics* (Section 6, Part 4). Subjects rated themselves on 44, 5-point Likert-type questions related to fourteen dimensions. See Table 23 for identification of these dimensions and the questions that relate to each one. Apart from the questions on “spirituality”, this inventory is used in its entirety from the Hawes and Kealey (CIDA 1979) study.<sup>40</sup>

**Table 23: Items and Dimensions Constructed for the Personal Dimensions Inventory**

Dimension	Questions Covering Dimension	Total Items
1. Tolerance	14, 15, 26	3
2. Initiative	2, 20, 37	3
3. Interpersonal Skills	1, 22, 28, 31, 34	5
4. Flexibility	3, 11, 30	3
5. Decision Making	4, 12, 27	3
6. Confidence	5, 18, 44	3
7. Ethnocentrism	6, 16, 29	3
8. Empathy	8, 23, 32	3
9. Respect	10, 25, 33	3
10. Perseverance	7, 39, 42	3
11. Social/Political Sensitivity	13, 38, 40	3
12. Frankness	17, 19, 24	3
13. Family Communication	35, 41, 43	3
14. Spirituality	9, 21, 36	3
		44

- 5. Missionary Colleague-Rated Forms on *Personal Characteristics*. Each subject was rated by a missionary colleague on thirteen of the dimensions listed above, questions written in such a way that they closely resembled the Personal Dimensions Inventory. The thirteen dimensions included: self-control under stress, initiative, relationship building, flexibility, decision-making style, self-confidence, listening skill, respect, perseverance, intercultural sensitivity, frankness, family communication, and spiritual life dynamics. In addition each rated the subject on the extent to which he or she makes

<sup>39</sup>Adapted in part from the Hawes and Kealey 1979 CIDA study, p. 211.  
<sup>40</sup>Ibid., pp. 208-210.



effort to contextualize his or her work, the extent of acculturation, and the ability to formulate and apply credible and workable strategies and plans in ministry.

### **Moderator Variables**

Finally, in an effort to find out what kind of constraining factors there might be on effective cross-cultural ministry, subjects filled out a *Support Structures* questionnaire. In it they identified first year, 2nd-3rd year, and current intensity of difficulty experienced in 94 problem areas along eight dimensions: living conditions, cognitive understanding of the culture, culture learning approaches, interpersonal relationships, intercultural contact, work habits, ministry, and emotional difficulties. As well they were asked to identify the sources of support and help received that enabled them to manage and overcome the problem: the mission organization, fellow missionaries, nationals, professionals (such as anthropologists, sociologists, missiologists, etc.), home or field church, subject's family, or no help from elsewhere--managed by self alone. These constraining factors were limited to self-report alone and were intended to be tested as moderator variables.

### **General Background Questions**

In addition to the instruments described above, subjects filled in questionnaires describing their general background (sex, age, nationality, marital status, maternal language, family characteristics, and family relationships), general education (degrees, pre-field training, and on-field training experiences), and specific educational content received in 67 subject areas. They were questioned on the value of educational content received as it pertained to their ministries as well as the current need for further knowledge in those subject areas. Finally, subjects were asked to identify the educational methods (formal and experiential) which they experienced in their pre-field and on-field training and the benefit or value of those methods for learning.

The intent of these two extensive educational questionnaires was to discover educational content which might be redundant, which consistently has been perceived as critical for ministry effectiveness, and which, when correlated with what subjects deemed effective, provide an optimal content and methods profile for the training of missionaries. These three questions are of primary interest to educational institutions, such as missionary-training colleges and seminaries.

### **Data Collection Procedure**

#### **Questionnaire to Personnel Directors or Candidate Secretaries**

After the preliminary questionnaire had been jury tested and changes made based on jury suggestions, questionnaires were type-set and printed in the form of booklets (8 1/2 in. by 5 1/2 in.) to make mailing easier and make the forms look more professional. Mailings

(questionnaire, cover letter, and stamped return envelope) were made to the candidate secretaries or personnel directors of 94 IFMA member missions and 77 EFMA member missions in April 1989. All were requested to return forms by July 31, 1989. In early September 1989 a second mailing (with a second cover-letter, questionnaire, and return stamped envelope) was undertaken to missions that had not responded. Total return was 77 (45%) return rate. While this number is not ideal, it is typical of this type of mail-out survey. Phoning and a third mailing were not undertaken because this survey was merely to augment the central part of the study, that done on the field with missionaries, with which this study is essentially concerned.

In February, 1990, with volunteer, trained student help, categorical data on the forms was transformed to numerical format<sup>41</sup> on Scantron forms, which in turn were fed through a reader and into a computer. This computer data was then set up in spread-sheet format, each variable as a column and all mission respondents as cases. Both categorical (by transferring numerics back to categorical) and numerical data were prepared from the input.

### **Survey of Evangelical Missions' Trainers**

Candidate Secretaries and Personnel Directors had been asked if they would be willing to have a questionnaire sent on to their pre-field and on-field trainers. Thirty-five either did not handle their own pre-field or on-field training or were unwilling to send on the questionnaire. Pre-field questionnaires were type-set and printed in the same booklet format as the form to the Personnel Directors. These were mailed with cover letter and stamped return envelope to the missions that were interested, included a few to Canadian or international offices (ie. Singapore for OMF) if training was offered in more than one country. A second mailing was made 6 weeks later and in time 46 questionnaires were returned (98%). These were subjected to the same data-transfer process described above in February and March 1990. As with the survey to Personnel Directors, this information was more to augment the main study and for the author's benefit.

### **Survey of Mission-Training Bible Colleges and Seminaries**

Again, this questionnaire was not central to this study. It was designed to get a perspective on missionary training from formal education: philosophy, design, and content and to contrast missionary perspectives on their training with that of educators. The procedure followed was the same as for the two questionnaires described above. After jury

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<sup>41</sup>For example, a Likert scale (very much, much, somewhat, little, very little) would be transformed to the order 1,2,3,4,5, and 9 for no answer. A question requiring "yes," "no," and "uncertain" would have each of these transformed to the order 1,2,3, and 9 for no answer. These numerical equivalents could then be transformed back to their categorical counterpart as needed on computer.



testing, making changes in accordance with jury suggestions, and printing in booklet format, the questionnaire was mailed to 135 Bible College and Seminaries in May 1989 with a request that it be returned by October 1989. These Colleges and Seminaries had been picked out as leading evangelical schools in North America from catalogues that were available and from listings in reference books on Colleges, Universities, and Seminaries in North America. A second mailing (form, cover letter, and stamped return envelope) was made in August 1989.

Fifty-four returns out of 135 resulted in a 40% return rate, which again is fairly typical for this type of survey. However, the spread of school was fairly good including 6 of less than 100 students, 2 of 101-200 students, 13 of 201-400 students, 13 of 401-600 students, 3 of 601-800 students, and 7 of over 800 students. These forms were subjected to the same data-transfer process described above during February and March 1990.

### **Field Missionary Questionnaires**

Missionaries from six missions were involved in the study. In June and July 1990 the Director for Latin America of each mission was contacted by phone and follow-up mail (containing a formal letter asking permission, description of the study, and questionnaires to be used) to ask for authorization to conduct the study. Each mission gave permission. In turn, Field Directors on each field were contacted by phone and mail to ask their consent and to work out arrangements for the study on the field. Field Directors contacted their missionaries in the cities where the study was to be conducted and told them of the study. All subjects agreed voluntarily to take part in the study.

With only one mission was there difficulty. That mission's Director for Latin America had failed to get in touch with the Brazil Field Director to let him know that the home office was giving permission for the study. This only came to light when the author arrived in Brazil. Since the Field Director was going to the United States for a conference during the first part of October he promised that he would clear things with the home office. This meant that the author was not able to contact missionaries from that large mission during the first month and had to back-track to cities where he had already been. As a result, he had to cut down on the amount of time he was able to spend in each city and could only meet with the missionary subjects. This meant that data from missionary colleagues and nationals had to be collected by mail.

Dependent variables, independent variables, moderator variables, and general background information were collected concurrently<sup>42</sup> in Brazil in seven weeks during the months of October and November 1989. In order to determine the New Tribes sample, field

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<sup>42</sup>This study had a concurrent rather than a longitudinal research design.

directors in Manaus and Anápolis divided their missionaries into two groups (who from their administrative perspective were considered *most effective* and who *less effective*). From these two groups samples were chosen. Because of the isolation of these missionaries, questionnaires, colleague-forms, and national-forms along with return envelopes and cover letters for all forms were placed in mailers, one for each missionary to be sent out on mission planes later. Completed forms in sealed envelopes were later returned to mission headquarters to be collected by the author at the end of November, or to be mailed on to Canada.

In each of the other cities<sup>43</sup> the process was essentially the same. The author met with the missionary subjects, explained the study purpose, made it clear that results would be confidential, and page by page went through the form explaining how to fill it out and answering any questions that arose. It was a pleasure meeting these missionaries. They were not only very cooperative, most of them seemed to appreciate the questionnaire, a few referring to it as a helpful gauge against which to measure themselves. Each subject completed the questionnaire and the author collected it. Each subject was also asked to give a questionnaire to a missionary colleague with a stamped return envelope and one to a national co-worker with a stamped return envelope.

The missionary-colleague and national co-worker questionnaires were self-explanatory and were written in the language of the respondent (English and Portuguese respectively). Colleagues and nationals filled their forms out and mailed them. The address on these forms was for the New Tribes headquarters in Anápolis near the capital Brasilia. The author went through there as the second last stop before leaving Brazil. Forms that arrived after the author left were mailed on to the author's address in Canada. Some of the Baptist groups and a few missionaries with CMML could not meet with the author and special instructional tapes were prepared to send to them with the questionnaires and stamped return envelopes. Their forms were also to be mailed to Anápolis, and from there to Canada if not picked up by the end of November.

During February and March teams of trained volunteer students transformed raw data to Scantron sheets which were machine-read and processed as with the questionnaires above. All computer data was checked against the original questionnaires to catch any errors that might have occurred and reduce such "problematic data" to a minimum.

### **Summary**

This chapter identified the research method requirements followed, the instruments that were developed or utilized, the characteristics of the missionary sample, and the data

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<sup>43</sup>Manaus, Santarem, Belém, São Luís, Fortaleza, Natal, Recife, Salvador, Belo Horizonte, Rio de Janeiro, São Paulo, Campinas, Curitiba, Florianopolis, and Porto Alegre.



collection procedures. These processes and instruments were developed and used to enable the following questions and hypothesis to be answered.

1. What is the relationship between ministry effectiveness and the extent to which missionaries become acculturated?
2. What is the correlation between acculturation, language learning, and socialization?
3. What is the relationship between ministry effectiveness and the extent to which ministry knowledge and activities are contextualized?
4. What is the relationship between prior education/training and ministry effectiveness?
5. To what extent do “traits” affect ministry effectiveness vrs. prior education?
6. Is there a correlation between self-rated spiritual dynamics, personal and ministry growth, and ministry effectiveness?
7. What predictors identify individuals who will be most effective in long-term ministry skills?

**Hypothesis 1:** There is a significant positive relationship between ministry effectiveness and the extent to which ministry knowledge and skills are contextualized.

Sub-hypothesis 1: Missionaries that demonstrate higher levels of "spiritual dynamic" in their ministries are more effective at contextualizing their ministries and are consequently more competent.

Sub-hypothesis 2: Missionaries that have high levels of satisfaction and anticipation in their ministries are more effective at contextualizing their ministries and are consequently more competent.

Sub-hypothesis 3: Missionaries that have high levels of language proficiency are more effective at contextualizing their ministries and are consequently more competent.

**Hypothesis 2:** Contextualization is affected by the extent to which the missionary identifies with the culture and the people (acculturation).

Sub-hypothesis 1: Missionaries that are students of the culture and of the national church are the most effective at contextualizing their ministries.

Sub-hypothesis 2: Missionaries that are actively involved socially with the people are better acculturated.

Sub-hypothesis 3: Missionaries that are actively involved socially with the people are better able to contextualize their work.

**Hypothesis 3:** Cross-cultural interaction skills<sup>44</sup> are influenced and developed by prior upbringing, education, and cross-cultural training.

**Hypothesis 4:** Cross-cultural interaction skills are influenced by personality characteristics.

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<sup>44</sup>Measured by language capacity, amount of time spent with nationals, and study of the culture.

Hypothesis 5: Cross-cultural ministry is sufficiently complex that predictors will also be diverse and complex. There will be no simple package of predictors that personnel directors can use.

The next chapter will present the results of statistical analyses based on five approaches to the data: *item analysis* giving data frequency distributions, means, and standard deviations, *factor analysis* reducing and forming like variables into factors, *step-wise regression* and *discriminant analysis* showing the relationships of predictor (independent) variables to criteria (dependent) variables, and split group (extreme end) *profile analysis*. Three computer programs, all of which have unique strengths, were used to analyse the data: The Statistical Package for Social Sciences (SPSS, Macintosh version 4.0), Data Desk Professional (version 3.0) and Statview II (version 1.03).



## **CHAPTER V**

### **ANALYSIS OF DEPENDENT, INDEPENDENT, AND MODERATOR VARIABLES**

#### **Dependent Variable Data Analysis**

Dependent variables here refer to those variables which are related to cross-cultural ministry competence. Language-speaking proficiency, the extent to which an individual is acculturated, ministry skills, the contextualization of one's work and ministry, the attitudes and satisfaction with one's life and work, and the amount of interpersonal and social interaction are all part of cross-cultural competence. Three instruments were used to test these dimensions: self-report, missionary-colleague report, and Brazilian-national report. These instruments (especially the self-report) were of two levels: general questions and specific-measurement questions. The general questions looked broadly at adjustment, personal satisfaction, and socialization. The specific-measurement questions were intended to measure more precisely the levels of acculturation, contextualization, ministry skills, and socialization. Item statistics will first be done on dependent and independent variables followed by Principal Components factor analysis and the development of factor scales.

#### **Item Statistics: General Measurement**

General Measurement self-rated questions include a total of 19 variables that were based on a 1-5 point Likert-type measuring system. The Adjustment Scale and the Personal Satisfaction Scale both were written with a "high" rating at the low end (i.e. "1") of each scale, but in order to bring them into line with all other scales they have been reversed, so that, like the others, they have their high ratings at the high end of the scale and low ratings at the low end of the scale (see footnotes for 1-5 indices). The Social Dimensions Scale (questions 1-7) did not have to be reformatted.

Theoretically, 3 should be an average rating. A look at Table 24 will show that the means in both the Adjustment Scale and the Personal Satisfaction Scale tend toward the high-end of the scale which may be due to halo and leniency effects, often found in self-reports, but probably due to the fact that these questions are more broad than precise and that the majority of missionaries had been on the field for more than five years and were well adjusted. The Socialization Scale is more balanced except for question 1 where the majority

have identified themselves very high, ie. <sup>4</sup>as hardly ever lonely (when the rating is read in reverse). “Commitment to ministry” also has a means that tends to the high end.

Item by item means and standard deviation for the same general questions by missionary colleagues and national observers appear in Table 25 and Table 26. Note that *nationals* rated missionaries even more positively than missionaries rated themselves *all the way through* both scales. This may indicate that either missionaries are highly acculturated and are perceived so by the nationals, there is a leniency effect, and/or the questions are not adequately precise.

Missionary *colleagues* also tended to rate their subjects very positively as well. The fact that both sets of observers did so indicates that 1) a wider set of observers should have been included, 2) missionaries are well adjusted to intercultural life and work, 3) there is a leniency effect, or 4) the general questions were too broad, needing more precisely formulated instruments. All four of these observations may be true.

Table 24: Item Statistics for Self-Rated Dependent Variables

Adjustment Scale (Section 6, Part 1)								
Item	1	2	3	4	5 <sup>1</sup>	n <sup>2</sup>	Mean	SD
1. Personal adjustment	0	1	21	40	28	90	4.0558	.7654
2. Acculturation	0	2	38	33	16	89	3.7079	.7775
3. Family Adjustment	0	4	21	43	15	83	3.8312	.7427
4. Ministry Effectiveness	0	4	34	41	12	91	3.6703	.7609
5. Concern w/dev. nationals	0	4	37	22	28	91	3.8132	.9299
Personal Satisfaction Scale (Section 6, Part 3)								
Item	1	2	3	4	5 <sup>3</sup>	n <sup>4</sup>	Mean	SD
1. Relation. w/missionaries	2	4	3	46	36	91	4.2088	.8758
2. Relation. w/nationals	1	2	5	50	53	91	4.2308	.7465
3. Quality of work exper.	1	6	12	53	19	91	3.9121	.8386
4. Develop. of work exper.	1	6	7	63	14	91	3.9121	.7695
5. Lang./Cult. lngg. progress	0	7	14	58	11	90	3.8111	.7480
6. Health	1	5	10	51	25	91	4.0549	.7798
7. Life and min. in general	0	4	5	48	34	91	4.2308	.7465

<sup>1</sup>1=Least; 2=Less than Average; 3=Average; 4=Better than Average; 5=Best. This itemizes the number of responses per scale level.

<sup>2</sup>Actual number of respondents on each item.

<sup>3</sup>1=Very dissatisfied; 2=Dissatisfied; 3=Neutral; 4=Satisfied; 5=Very satisfied.. This itemizes the number of responses per scale level.

<sup>4</sup>Actual number of respondents on each item.



Socialization Scale (Section 6, Part 5, Questions 1-7)

Item	1	2	3	4	5 <sup>5</sup>	n <sup>6</sup>	Mean	SD
1. Lonely	58	26	5	2	0	91	1.4615	.7041
2. Social interaction/friends	2	20	26	32	11	91	3.3297	1.0226
3. Factual knowledge	3	27	30	28	3	91	3.0110	.9368
4. Accept country/customs	1	6	38	36	10	91	3.5275	.8211
5. Engage in activities w/people	4	24	28	27	6	89	3.0808	1.0026
6. Appropriate ed. for ministry	0	20	37	25	8	90	3.2339	.8951
7. Commitment to ministry	0	3	12	38	36	89	4.2037	.7914

Table 25: Item Statistics for National-Rated Dependent Variables

Adjustment Scale (Part 1)

Item	1	2	3	4	5 <sup>7</sup>	n <sup>8</sup>	Mean	SD
1. Personal adjustment	0	0	15	26	37	78	4.2821	.7712
2. Adaptation to the culture	0	4	26	20	27	77	3.9091	.9484
3. Family adaptation	0	1	19	19	31	70	4.1429	.8728
4. Ministry Effectiveness	0	0	11	23	45	79	4.4304	.7283
5. Concern to develop nats.	0	1	20	17	41	79	4.2405	.8802

Acculturation/Contextualization Scale (Part 2)

Item	1	2	3	4	5 <sup>9</sup>	n <sup>10</sup>	Mean	SD
1. Commun. in common lang.	0	5	19	31	28	83	3.9880	.9038
2. Non-verbal commun. skills	2	12	13	32	22	81	3.7407	1.0929
3. Understands religious beliefs	0	8	21	29	22	80	3.8125	.9559
4. Factual knowl. of country	3	14	24	23	16	80	3.4375	1.1120
5. Cultural decision methods	3	17	26	23	9	78	3.2308	1.0435
6. Cult. ways of commun.	0	3	17	30	29	79	4.0759	.8589
7. Enjoys art., lit., traditions	6	15	22	26	10	79	3.2405	1.1347
8. Good social manners	0	3	7	30	43	83	4.3614	.7899
9. Learns cult. ways from peo.	8	8	20	30	13	79	3.4051	1.1823

<sup>5</sup>1=Hardly at all; 2=Some Extent; 3=Quite a bit; 4=A Great Deal; 5=Completely. This itemizes the number of responses per scale level.

<sup>6</sup>Actual number of respondents on each item.

<sup>7</sup>This scale is reversed from the way written so that high scores are at the high end of the scale (“5) and low scores at the low end “1”): 1=Least; 2=Less than Average; 3=Average; 4=Better than Average; 5=Highest. This itemizes the number of responses per scale level.

<sup>8</sup>Actual number of respondents on each item.

<sup>9</sup>1=Hardly at all; 2=Some Extent; 3=Quite a bit; 4=A Great Deal; 5=Completely. This itemizes the number of responses per scale level.

<sup>10</sup>Actual number of respondents on each item.

Item	1	2	3	4	5	n	Mean	SD
10. Cult. patt. for conflict. res.	0	11	14	33	21	79	3.8101	.9881
11. Uses cult. material patterns	4	16	18	21	23	82	3.5244	1.2295
12. Has joking relationships	0	4	16	26	37	83	4.1566	1.2295
13. Partic. trad. ceremonies	2	12	18	28	18	78	3.6154	1.0839
14. Adapts. arguem. to values	2	9	23	27	22	83	3.6988	1.0562
15. Works w.Braz. Church Ldrs.	0	5	14	23	39	81	4.1852	.9369
16. Comm. Bibl. truth context.	1	9	19	21	33	83	3.9157	1.0843
17. Seeks advice of Braz. Ldrs.	3	15	12	23	30	83	3.7470	1.2282
18. Interacts well w/Braz.	1	5	8	34	35	83	4.1687	.9216
19. Does not disparage Braz.	10	6	8	19	34	77	3.7922	1.4174
20. Concern with training Braz.	1	10	8	23	38	80	4.0875	1.0931
21. Ministry fits context	3	6	14	26	31	80	3.9500	1.1012
22. Seems happy in ministry	0	2	6	24	50	82	4.4878	.7411

Table 26: Item Statistics for Missionary Colleague-Rated Dependent Variables

Personal Ministry Statements<sup>11</sup> (Colleague Questionnaire, # 14-21)

Item	1	2	3	4	5 <sup>12</sup>	n <sup>13</sup>	Mean	SD
14. Studies culture/seeks advice	1	10	26	39	1	90	3.6111	.9204
15. Interacts well w/ Brazilians	0	13	15	32	31	91	3.8901	1.0376
16. Has education needed for min.	2	3	12	43	30	90	4.0667	.8969
17. Brazilian in thinking & doing	6	32	27	21	5	91	2.8571	1.0282
18. Committed to ministry	0	5	14	40	31	90	4.0778	.8510
19. Concerned w/training Braz.	3	8	22	32	22	87	3.7126	1.0555
20. Desires fit ministry to context	1	7	18	40	24	90	3.8778	.9341
21. Apply credible min. strategies	2	8	26	46	7	89	3.5393	.8536

Item Statistics: Specific-Measurement

The fact that the Specific-Measurement variables tend to have a balanced distribution of mean and standard deviation on every scale seems to indicate that they are more precise than the general questions. The mean is highest for 1) *I appreciate...language* under the “Acculturation” scale “I appreciate...,” followed by 2) *“equal” interaction with nationals*

<sup>11</sup>To be consistent with all other scales this has also been reversed from the way written so that high scores are at the high end of the scale (“5) and low scores at the low end (“1”).

<sup>12</sup>1=Hardly at all; 2=Some Extent; 3=Quite a bit; 4=A Great Deal; 5=Completely. This itemizes the number of responses per scale level.

<sup>13</sup>Actual number of respondents on each item.



under the “Contextualization of Work” scale “How I relate to the culture,” 3) *working to develop the Church so that I can move on to a new ministry* under the “Contextualization of Work” scale “How I Relate Ministry and Culture”, and 4) *work with and under nationals* under the “How I Relate Ministry and Culture” scale. The most negatively-oriented means (though not markedly so) were for the variables “*I have factual knowledge about what constitutes art and literature in the ethos of this culture*” and “*I appreciate customs related to child rearing*” under the “Acculturation” scales “Factual Knowledge” and “I Appreciate....”

Table 27: Item Statistics for Self-Rated Dependent Variables  
Specific-Measurement

Acculturation Scales

1. I have factual knowledge...

Item	1	2	3	4	5 <sup>14</sup>	n <sup>15</sup>	Mean	SD
1. Traditions of culture	1	21	35	28	5	91	3.1648	.8852
2. Cosmological beliefs	2	11	37	34	6	90	3.3504	.8603
3. Socialization practices	0	13	28	46	4	91	3.4505	.7925
4. Art and lit.-ethos	12	37	26	12	1	87	2.4694	.9185
5. Cultural rituals	2	18	26	40	5	91	3.3077	.9273
6. Kin-relationships	2	9	35	38	7	91	3.4286	.8582
7. Comm. flow	5	15	36	30	3	89	3.1239	.9168
8. History of culture/people	2	5	51	27	6	91	3.3297	.7754
9. Material culture	2	7	24	49	8	90	3.6000	.8406
10. Economic structures	2	10	41	31	7	91	3.3407	.8592
11. Authority structures	2	11	40	27	10	90	3.3557	.9106
12. Cult. def. of success	2	8	29	42	10	91	3.5495	.8852

2. I understand...

Item	1	2	3	4	5 <sup>16</sup>	n <sup>17</sup>	Mean	SD
1. Oral trad.--"truths"	4	18	39	24	1	86	3.0005	.8300
2. Influence of religion	2	3	38	39	7	89	3.5175	.7762
3. Soc.--adult relationships	4	6	34	39	4	87	3.3800	.8465
4. Art/lit--needs/beliefs	6	26	40	14	1	87	2.7506	.8331
5. Rituals--beliefs	6	14	36	29	2	87	3.0800	.9094

<sup>14</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>15</sup>Actual number of respondents on each item.

<sup>16</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>17</sup>Actual number of respondents on each item.

Item	1	2	3	4	5	n	Mean	SD
6. Kinship--communication	5	16	31	32	4	87	3.1391	.9330
7. Communication flow	6	27	33	15	3	84	2.7830	.9077
8. History influence on culture	2	13	33	37	3	87	3.2948	.8321
9. Material culture--patterns	1	18	37	28	3	87	3.1599	.8148
10. Local/nation. economic str.	7	18	40	18	3	86	2.9116	.9146
11. Decision-making process	3	22	39	19	6	89	3.0330	.9244

**3. I have insight...**

Item	1	2	3	4	5 <sup>18</sup>	n <sup>19</sup>	Mean	SD
1. Cultural character	2	16	33	36	4	91	3.2637	.8798
2. Relig.Beliefs--Cult.Values	2	15	32	36	5	90	3.3001	.8876
3. World-view of culture	2	18	44	22	4	90	3.0895	.8386
4. Impact of traditions on ethos	3	25	39	19	2	88	2.9092	.8385
5. Socializ. effect on actions	3	15	46	25	1	90	3.0664	.7860
6. Kin.patterns--innov./change	8	29	32	18	2	89	2.7416	.9490
7. Patterns of comm. entry	6	23	37	20	3	89	2.8986	.9315
8. Relating to authority struct.	5	21	41	18	3	88	2.9228	.8848
9. Effective communication	6	19	35	25	4	89	3.0227	.9658
10. Core/fringe of society	2	10	37	34	5	88	3.3396	.8285

**4. I appreciate...**

Item	1	2	3	4	5 <sup>20</sup>	n <sup>21</sup>	Mean	SD
1. Music	2	14	44	25	6	91	3.2088	.8630
2. Art, literature, traditions	4	8	53	24	2	91	3.1319	.7776
3. Social manners	2	11	32	42	4	91	3.3846	.8402
4. Child rearing customs	5	45	34	7	0	91	2.4725	.7202
5. Dress	2	21	40	24	4	91	3.0769	.8722
6. Language	0	1	9	51	30	91	4.2088	.6586
7. Authority/individ. values	3	32	33	21	2	91	2.8571	.8891
8. Male & female roles/status	4	35	37	14	1	91	2.7033	.8232
9. Honour/self-respect values	1	24	42	23	1	91	2.9890	.7817
10. Values from traditions	5	13	50	21	2	91	3.0220	.8297

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<sup>18</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>19</sup>Actual number of respondents on each item.

<sup>20</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>21</sup>Actual number of respondents on each item.



5. I identify with and have accepted...

Item	1	2	3	4	5 <sup>22</sup>	n <sup>23</sup>	Mean	SD
1. Patterns to handle conflict	4	18	31	32	2	87	3.1130	.8997
2. Oral communic. patterns	3	9	35	39	1	87	3.2972	.7905
3. Media and commun. methods	5	11	35	33	3	87	3.2078	.8962
4. Authority, decision. values	5	24	41	20	1	91	2.8681	.8591
5. Male & female roles/status	6	28	37	19	0	90	2.7667	.8570
6. Honour/self-respect values	4	23	38	23	2	90	2.9550	.8808
7. Traditional values	5	20	43	20	1	89	2.9100	.8385
8. Inter-personal social patterns	3	12	38	37	1	91	3.2308	.8175
9. Material cultural patterns	3	11	31	40	6	91	3.3846	.9039
10. Approval/disapproval	0	2	24	54	10	90	3.8007	.6532

6. I know how and enjoy...

Item	1	2	3	4	5 <sup>24</sup>	n <sup>25</sup>	Mean	SD
1. Polite/correct social interact.	0	5	16	60	10	91	3.8242	.6927
2. Customs in behaviour	1	5	21	51	13	91	3.7692	.8038
3. Joking/teasing relationships	1	3	23	41	23	91	3.9011	.8571
4. Traditional ceremonies	5	12	24	36	13	90	3.4444	1.0667
5. Recreational places	3	11	22	34	16	86	3.5686	1.0170
6. Balancing work/play cult.	4	19	38	20	7	88	3.0804	.9571
7. Learning from mentors	2	6	26	44	13	91	3.6593	.8847
8. Art, cultural hobbies	16	25	20	17	10	88	2.7753	1.2538

Contextualization of Work Scales

1. How I relate to the culture

Item	1	2	3	4	5 <sup>26</sup>	n <sup>27</sup>	Mean	SD
1. Adapt argue. to values	1	12	34	36	6	89	3.3823	.8367
2. Non-verb. communication	2	5	36	41	5	89	3.4724	.7759
3. Comfort--decision-making	2	16	36	31	3	88	3.1951	.8415
4. Know homogen. groups	1	7	22	48	7	85	3.6233	.7743
5. Utilize kin linkages	3	7	26	42	8	86	3.5256	.8785

<sup>22</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>23</sup>Actual number of respondents on each item.

<sup>24</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>25</sup>Actual number of respondents on each item.

<sup>26</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>27</sup>Actual number of respondents on each item.

6. Introduce new concept	9	16	30	21	5	81	2.9743	1.0164
7. Identify “unofficial” leaders	8	18	22	29	6	83	3.0917	1.0670
8. Know changing values	13	17	34	23	1	88	2.7979	1.0129
9. Use of needs	6	15	34	28	4	87	3.1075	.9551
10. “Equal” interaction	1	3	12	52	20	88	3.9899	.7673
11. At home in the systems	6	6	19	42	16	89	3.6297	1.0581

2. How I relate ministry and culture

Item	1	2	3	4	5 <sup>28</sup>	n <sup>29</sup>	Mean	SD
1. Integrate biblical truth	2	4	25	47	5	83	3.5973	.7462
2. Biblical form of Christianity	7	15	21	37	3	83	3.1780	.9985
3. Work with or under nationals	0	3	16	44	15	78	3.9176	.6864
4. Study culture for ministry	7	17	28	23	8	83	3.1097	1.0509
5. Eff. pres. of biblical truth	6	6	26	40	9	87	3.4465	.9886
6. Balance self and cult. values	4	8	28	35	10	85	3.4652	.9496
7. Nationals adapting my work	4	11	25	31	10	81	3.4051	.9743
8. Use metaphors/analogies	10	15	24	25	2	76	2.9341	.9866
9. Developing nat. leaders	5	5	23	28	14	77	3.5666	.9818
10. Ch. dev. to move on	1	5	11	34	22	73	3.9843	.8300

Factor Analysis

Principal-components factor analysis (using Pearson product-moment correlations) with varimax oblique rotation<sup>30</sup> was computed on five separate groups: 1) the 19 dependent variables of the **general adjustment questions** from the self-rating questionnaire (the Adjustment Scale, the Personal Satisfaction Scale, and the Social Dimensions-Likert Scale<sup>31</sup>), 2) the 61 variables of the specific-measurement self-rated questionnaire from the **Acculturations Scale** (Section 4, Part 1), 3) the 21 variables of the specific-measurement self-rated questionnaire from the **Intercultural Ministry Skills Scale** (Section 4, Part 2); 4) the 28 items of the **national-rated questionnaires**; and 5) 8 questions (Personal Ministry Statements) from the **missionary-colleague ratings**. Complete factor loading matrices for all dependent variables are in Appendix 5.

<sup>28</sup>1=None; 2=Very little; 3=Some; 4=Quite a bit; 5=In-depth. This itemizes the number of responses per scale level.

<sup>29</sup>Actual number of respondents on each item.

<sup>30</sup>Oblique rotation was chosen rather than orthogonal because the factors tended to have low correlations which were still statistically significant. The oblique solution on correlated factors reduced the magnitude of these low loadings.

<sup>31</sup>The question “To what extent do you possess appropriate education and training for people-related ministry?” has been dropped as not related to *socialization* and substituted with question 15 from the same section, “I visit in a national home....”



A 75% variance rule was followed with all analyses except for missionary colleague ratings where a criterion of roots (eigenvalues) greater than one was utilized and with national-rated variables where factors were forced beyond the 75% variance rule to the first level with intercorrelations less than .50. Generally a significance loading of .50 or higher was required of all factors unless a variable was specifically significant to the factor orientation.

Because regression analysis must be done on each dependent variable against all independent variables, and because some of the independent variables are national-rated, factor analysis was done only on those in the missionary self-rated sample for whom national-rated returns were received. Thus, the total sample is reduced from 120 to 91. Furthermore, because listwise deletion reduces the sample too much<sup>32</sup> and pairwise deletion potentially results in artificial correlations,<sup>33</sup> occasional missing data in any variable has been replaced by the variable's means. This enables the total sample to be maintained throughout all levels of analysis. Tables 24-27 show the the number of cases on each variable with missing data.

Factor Analysis of Self-Rated Dependent Variables: General Adjustment Questions<sup>34</sup>

The items being factored are rich in complexity, each variable being able to account for more than one factor. Normally, average variable complexity should be at 1. Note that these variables are all higher than 1, thus potentially defining more than one factor.<sup>35</sup> The average is 2.15 (orthogonal solution) and 1.775 (oblique solution). The richest variables are: relating to nationals, satisfaction with life in general, commitment to ministry, general knowledge of the country, and language learning.

<sup>32</sup>When any data is missing, the entire case is cut in factor analysis. Regression analysis further cuts any cases with missing data when dependent variables are compared with all independent variables. The result is a seriously truncated study.

<sup>33</sup>“Pairwise deletion has the advantage of utilizing as much data as possible in the computation of each of the simple coefficients. It has the disadvantage, however, of (under certain circumstances) producing highly artificial correlations that are based on a very different number of cases and perhaps even on quite different subpopulations.” Statistical Package for the Social Sciences, p. 504.

<sup>34</sup>This scale is developed from the Adjustment Scale (Section 6, Part 1), the Personal Satisfaction Scale (Section 6, Part 3), and the Social Dimensions Questions (question 1-5, 7, and 15 of Section 6, Part 5).

<sup>35</sup>The following chart of variable complexity has factor density identified both by orthogonal and oblique solutions. The oblique solution reduces the complexity. In the table each variable is followed first by the orthogonal average and then by the oblique average. The complexity of these variables is shown in that simple factor density should be at 1.000.

Pers.Adj.	1.668	1.496	Accult.	1.573	1.101	Fam.Adj.	1.743	1.548
Min.Eff.	1.409	1.264	Dev.Nat.	3.27	3.757	Miss.Relate	1.543	1.46
Nat.Relate	5.016	3.674	WorkQual.	1.537	1.191	WorkDev.	1.274	1.091
Lang.Lrn.	2.218	1.697	Health	1.868	1.356	GeneralLife	4.279	3.903
Lonely	1.216	1.241	Interact	2.379	1.602	KnowCountry	2.226	1.558
AcceptCount...	1.354	1.222	EnjoyActiv.	1.742	1.319	Commitment	3.269	2.183
VisitNat.	1.26	1.058						

Factor analysis on these general adjustment questions resulted in 8 basic dimensions or factors (see Table 28 for the results). The total matrix sampling adequacy was .844 which suggests that the data are a homogeneous collection of variables and therefore suitable for factor analysis.<sup>36</sup> Bartlett’s Test of Sphericity<sup>37</sup> (DF:189) and a Chi Square value of 888.062 which is significant at the .0001 level indicate that these factors do not likely occur as a function of chance. Because an oblique solution is being utilized, primary factor intercorrelations were computed and showed that essentially all factors had been extracted, since all are under the .50 level.<sup>38</sup>

**Table 28: Results of Factor Analysis  
on Self-Rated Dependent Variables: “General Adjustment Questions”<sup>39</sup>**

**Factor 1: (D1) Adjustment to Culture and Ministry**

(Eigen Value: 7.125. Percent of Total Variance: 37.5%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Sense of effectiveness in handling ministry responsibil. (Section 6, Part 1, 4)	3.67	.846
2. Family adjustment to the culture (Section 6, Part 1, 3)	3.83	.846
3. Acculturation: using cultural patterns, ways, and values (Section 6, Part 1, 2)	3.71	.815
4. Personal adjustment to the culture (Section 6, Part 1, 1)	4.06	.788
5. Concern for the development and growth nationals (Section 6, Part 1, 5)	3.81	.572

<sup>36</sup>The measures of variable sampling adequacy for each item shows that all are considerably above the .50 level and therefore substantially high enough for factor analysis.

Pers.Adj.	.890	Accult.	.887	Fam.Adj.	.873	Min.Eff.	.872
Dev.Nat.	.878	Miss.Relate	.709	Nat.Relate	.875	WorkQual.	.796
WorkDev.	.734	Lang.Lrn.	.925	Health	.793	GeneralLife	.800
Lonely	.839	Interact	.855	KnowCountry	.894	AcceptCountry	.775
EnjoyActiv.	.816	Committment	.882	VisitNat.	.875		

<sup>37</sup>A multivariate analog of the statistical test frequently applied to a single correlation coefficient to see if it is significantly different from 0.

<sup>38</sup>An orthotran algorithm was used to obtain these primary intercorrelations.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Factor 1	1							
Factor 2	.236	1						
Factor 3	.42	.329	1					
Factor 4	.419	.237	.371	1				
Factor 5	.305	.278	.101	.198	1			
Factor 6	.411	.16	.264	.346	.34	1		
Factor 7	-.161	-.127	-.238	-.176	-.205	-.238	1	
Factor 8	.294	.313	.2	.23	.25	.062	.242	1

<sup>39</sup>These “general questions” are taken from 3 scales: the *Adjustment Scale* (Section 6, Part 1), the *Personal Satisfaction Scale* (Section 6, Part 3), and the *Socialization Scale* (Section 6, Part 5, questions 1-7).



**Factor 2: (D2) Physical and Psychological Health**

(Eigen Value: 1.984. Percent of Total Variance: 10.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Satisfaction with missionary relationships (Section 6, Part 3, 1)	4.21	.869
2. Satisfaction with health (Section 6, Part 3, 6)	4.23	.767

**Factor 3: (D3) Satisfaction with Ministry Development (Progress)**

(Eigen Value: 1.414. Percent of Total Variance: 7.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Satisfaction with development of work (Section 6, Part 3, 4)	3.91	.921
2. Satisfaction with quality of work (Section 6, Part 3, 3)	3.91	.848
3. Satisfaction with progress of language learning (Section 6, Part 3, 5)	3.81	.634

**Factor 4: (D4) Interpersonal Interaction with Nationals**

(Eigen Value: 1.085. Percent of Total Variance: 5.7%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Visiting nationals in their homes (Section 6, Part 5, 15)	2.82	.912
1. Interaction with nationals; national friends (Section 6, Part 5, 2)	3.33	.412

**Factor 5: (D5) Satisfaction with and Commitment to Culture and Ministry**

(Eigen Value: .944. Percent of Total Variance: 5.0%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Acceptance of the country and culture (Section 6, Part 5, 4)	3.53	.838
2. Commitment to ministry (Section 6, Part 5, 7)	4.20	.549
3. Satisfaction with life in general (Section 6, Part 3, 7)	4.23	.525

**Factor 6: (D6) Satisfaction with Social Interaction**

(Eigen Value: .825. Percent of Total Variance: 4.3%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Involvement in enjoyable activities with nationals (Section 6, Part 5, 5)	3.08	.831
2. Interaction with nationals; national friends (Section 6, Part 5, 2)	3.33	.676

**Factor 7: (D7) Adequate Social Interaction**

(Eigen Value: .789. Percent of Total Variance: 4.2%. Factor direction-negative <sup>40)</sup>

Variable and Instrument Item #	Var. Mean	Factor Loading
1. [Not] lonely; (adequate social interaction) (Section 6, Part 5, 1)	1.46	1.003

<sup>40)</sup>This factor has to be reversed in order to interpret it positively in accordance with the title given to it.

Factor 8: (D8) Commitment to Learning Culture and Country

(Eigen Value: .735. Percent of Total Variance: 3.9%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Knowledge of the country (Section 6, Part 5, 3)	3.01	.764

These eight factors account for 78.4% of the total variance. Factor 1, *Adjustment to Culture and Ministry* is the most significant, accounting for 37.5% of the variance. Factor 2, *Physical and Psychological Health* is the next most significant at 10.4% variance. Then come Factor 3, *Ministry Development (Progress)* (7.4%), Factor 4, *Interpersonal Interaction* (5.7%), Factor 5, *Commitment to and Satisfaction with Ministry* (5.0%), Factor 6, *Satisfaction with Social Interaction* (4.3%), Factor 7, *Not Lonely* (4.2%) and Factor 8, *Orientation to Field Learning* (3.9%). The variables which surfaced with a high loading in each are highly salient to each factor.

Factor score weights were computed with the factor loadings and scales were derived from these for every subject on each factor. These scales will be the basis for comparative analysis using multiple regression as well as for extreme group analysis. Table 29 gives the sample size, the mean, the median, standard deviation, range, and skew for each factor. These scales are symmetrical with low mean, skew, and kurtosis. The factors with the largest skew are factor 2, *Physical and Psychological Health* and factor 6, *Satisfaction with Social Interaction*.

Table 29: Item Statistics for the Dependent “General Adjustment Questions”<sup>41</sup> Factors

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (D1) Adjustment to Culture and Ministry							
91	0.0000	0.10100	1.2557	8.4870	-5.4830	3.0040	-0.88319
Factor 2: (D2) Physical and Psychological Health							
91	0.00001	0.15400	1.1195	5.7390	-3.5110	2.2280	-1.1264
Factor 3: (D3) Satisfaction with Ministry Development/Progress							
91	0.00003	0.21800	1.2021	5.8700	-3.4820	2.3880	-0.66680
Factor 4: (D4) Interpersonal Interaction with Nationals							
91	0.00003	-0.14100	1.1845	5.2760	-2.6150	2.6610	0.09562

<sup>41</sup>These “general questions” are taken from 3 scales: the *Adjustment Scale* (Section 6, Part 1), the *Personal Satisfaction* Scale (Section 6, Part 3), and the *Socialization Scale* (Section 6, Part 5, questions 1-5, 7, and 15).



n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 5: (D5) Satisfaction with and Commitment to Culture and Ministry							
91	-0.00003	-0.00400	1.1446	6.2860	-2.8370	3.4490	-0.12271
Factor 6: (D6) Satisfaction with Social Interaction							
91	0.00001	-0.33000	1.0699	5.0310	-1.5350	3.4960	1.1225
Factor 7: (D7) Adequate Social Interaction							
91	0.00000	0.06400	1.1668	6.3000	-3.0620	3.2380	0.20500
Factor 8: (D8) Commitment to Learning Culture and Country							
91	0.00001	0.10400	1.1228	5.6830	-3.4550	2.2280	-0.45676

Factor Analysis of Self-Rated Dependent Variables, “Acculturation”

With 61 variables in 6 sections the Acculturation Scale was too complex to factor analyze all variables together. Analysis was undertaken section by section since each is measuring either a different dimension (cognitive, affective, and behavioural) or a different level of the same dimension (as the first three, for example, move from 1) knowledge of facts about the culture to 2) understanding of their implications in the culture to 3) insight into their applications in the culture).<sup>42</sup> An oblique solution was chosen for all sections because it resulted in clearer differentiation than did the orthogonal solution which had a tendency to place most variables in one factor.

Table 30: Results of Factor Analysis on Self-Rated Dependent Variables “Acculturation”

Factor 1: (D9) Factual Knowledge of Economic and Political Structures<sup>43</sup> (Note: The section “I Have Factual Knowledge...” [Section 4, Part 1, A] was factor analysed on its own and resulted in three factors which are here being presented as factors D9-D11. Eigen values and percent of total variance is only for comparison within these three factors.)

(Eigen Value: 7.376. Percent of Total Variance of 3 factors: 61.5% Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Knowledge about authority structures (Section 4, Part 1, Q.11)	3.36	1.006
2. Knowledge about economic structures (Q.10)	3.34	.756
3. Knowledge about how the culture defines success (Q.12)	3.55	.632

<sup>42</sup>See pp. 198-201 for discussion on the taxonomy from which these scales were written.

<sup>43</sup>These variables related to *Factual Knowledge* are rich in complexity, each being able to account for more than one factor. The average is 1.485 (orthogonal solution) and 1.348 (oblique solution). The total matrix sampling adequacy is .913. Bartlett’s Test of Sphericity was DF:77 and the Chi Square value 865.846 (p=.0001). The following table indicates that not all factors may have been extracted since the factor to factor correlations are above .50; however, extraction appears to have been adequate.

	Factor 1	Factor 2	Factor 3
Factor 1	1		
Factor 2	.564	1	
Factor 3	.727	.643	1

Factor 2: (D10) Factual Knowledge of Belief Structures

(Eigen Value: 1.103. Percent of Total Variance of 3 factors: 9.2% Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Knowledge about the oral and written traditions of the culture (Q.1)	3.16	.876
2. Knowledge about history of the people and culture (Q.8)	3.33	.766
3. Knowledge of what constitutes art and lit. in ethos of the culture (Q.4)	2.47	.752
4. Knowledge about religious (cosmological) beliefs of the culture (Q.2)	3.35	.685

Factor 3: (D11) Factual Knowledge of Sociological Structures

(Eigen Value: .651. Percent of Total Variance of 3 factors: 5.4% Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Knowledge about kin-relationships in the culture (Q.6)	3.43	.772
2. Knowledge about child-rearing and socialization practices (Q.3)	3.45	.761
3. Knowledge about communication flow in society (Q.7)	3.12	.759
4. Knowledge about the life-cycle rituals of the culture (Q.5)	3.31	.746
5. Knowledge about material culture (Q.9)	3.60	.640

Factor 4: (D12) Understanding of Cultural Ethos and Social Structure<sup>44</sup> (Note: The section “I Understand...” [Section 4, Part 1, B] was factor analysed on its own and resulted in three factors which are here being presented as factors D12-D14. Eigen values and percent of total variance is only for comparison within these three factors.)

(Eigen Value: 6.776. Percent of Total Variance of 3 factors: 61.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...how art, lit., and music express needs and longings of the people (Q.4)	2.75	.991
2. ...connection between how children socialized and adult behaviour (Q.3)	3.38	.864
3. ...how rituals fit patterns of beliefs (Q.5)	3.08	.840
4. ...how oral and written traditions fit to form cultural “truths” (Q.1)	3.00	.746
5. ...how patterns of religious thought impact life of the people (Q.2)	3.52	.714
6. ...communication and relationships in kinship patterns (Q.6)	3.14	.710

<sup>44</sup>Complexity of these variables related to *Understanding of the Culture* averages 1.454 (orthogonal solution) and 1.234 (oblique solution). The total matrix sampling adequacy is .898. Bartlett’s Test of Sphericity was DF:65 and the Chi Square value 740.446 (p=.0001). The following table indicates that not all factors may have been extracted since all factor to factor correlations are above .50; however, extraction appears to have been adequate.

	Factor 1	Factor 2	Factor 3
Factor 1	1		
Factor 2	.589	1	
Factor 3	.667	.61	1



Factor 5: (D13) Understanding of Cultural Economic and Political Structure

(Eigen Value: 1.003. Percent of Total Variance of 3 factors: 9.1%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...relationships of local and national economic structures (Q.10)	2.91	1.004
2. ...how decisions are made, communicated, and exercised (Q.11)	3.03	.775

Factor 6: (D14) Understanding of History’s Influence on Culture

(Eigen Value: .594. Percent of Total Variance of 3 factors: 5.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...how history of the people has influenced their culture (Q.8)	3.29	1.024
2. ...communication flow within, out of, and into the culture (Q.7)	2.78	.532
3. ...how cultural values are seen in the material culture (Q.9)	3.16	.504

Factor 7: (D15) Insight into the Culture’s Personality<sup>45</sup> (Note: The section “I Have Insight...” (Section 4, Part 1, C) was factor analysed on its own and resulted in three factors which are here being presented as factors D15-D17. Eigen values and percent of total variance is only for comparison within these three factors.)

(Eigen Value: 6.64. Percent of Total Variance of 3 factors: 66.4%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...into the impact the traditions of the culture have made on its ethos (Q.4)	2.91	.897
2. ...into why people act as they do as a result of socialization processes (Q.5)	3.07	.822
3. ...how kin. patterns present ways for diffusion of innovation & change (Q.6)	2.74	.774

Factor 8: (D16) Insight into Communicating through Accepted Structures

(Eigen Value: .724. Percent of Total Variance of 3 factors: 7.2%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...into accepted patterns for relating to authority structures (Q.8)	2.92	.786
2. ...into accepted and effective communication channels and media (Q.9)	3.02	.448

<sup>45</sup>Complexity of these variables related to *Insight into Culture* averages 1.403 (orthogonal solution) and 1.258 (oblique solution). The total matrix sampling adequacy is .925. Bartlett’s Test of Sphericity is DF:54 with a Chi Square value of 731.369 (p=.0001). The following table indicates that not all factors may have been extracted since most factor to factor correlations are above .50; however, extraction appears to have been adequate.

	Factor 1	Factor 2	Factor 3
Factor 1	1		
Factor 2	.493	1	
Factor 3	.759	.609	1

Factor 9: (D17) Insight into Cultural Values/Beliefs

(Eigen Value: .602. Percent of Total Variance of 3 factors: 6.0%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. ...into basic assumptions and values generated by religious beliefs (Q.2)	3.30	.891
2. ...into the world-view of this people (Q.3)	3.09	.889
3. ...into which people constitute the fringe & which the core of society (Q.10)	3.34	.834
4. ...into the cultural character of this people (motives, traits, beliefs, etc.) (Q.1)	3.26	.707

Factor 10: (D18) Appreciation for Social Role Values<sup>46</sup> (Note: The section “I Appreciate...” [Section 4, Part 1, D] was factor analysed on its own and resulted in four factors which are here being presented as factors D18-D21. Eigen values and percent of total variance is only for comparison within these four factors. An oblique solution with varimax rotation was used.)

(Eigen Value: 4.862. Percent of Total Variance of 4 factors: 48.6%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Values related to male and female roles and status (Q.8)	2.70	.923
2. Values related to authority and individualism (Q.7)	2.85	.874

Factor 11: (D19) Appreciation for Cultural Fine Arts

(Eigen Value: 1.362. Percent of Total Variance of 4 factors: 13.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Art, literature, and traditions of the people (Q.2)	3.13	.914
2. Music (Q.1)	3.21	.871

Factor 12: (D20) Appreciation for Social Customs

(Eigen Value: .680. Percent of Total Variance of 4 factors: 6.8%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Social manners (Q.3)	3.38	.885
2. Appreciation for the dress of the people (Q.5)	3.08	.721
3. Values relating to honour and self-respect (Q.9)	2.99	.599
4. Appreciation for customs related to child-rearing (Q.4)	2.47	.553
5. Values arising from cultural traditions (Q.10)	3.02	.539

<sup>46</sup>Variable complexity for variables *I Appreciate...* averages 1.725 (orthogonal solution) and 1.463 (oblique solution). The total matrix sampling adequacy is .847. Bartlett’s Test of Sphericity is DF:54 and the Chi Square value is 422.812 (p=.0001). The following table indicates that all factors appear to have been extracted since all but one factor to factor correlations are below .50.

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1			
Factor 2	.331	1		
Factor 3	.59	.447	1	
Factor 4	.344	.386	.439	1



Factor 13: (D21) Appreciation for Language

(Eigen Value: .657. Percent of Total Variance of 4 factors: 6.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Language of the people (Q.6)	4.21	.849

Factor 14: (D22) Identification with Acceptable Social Fir<sup>47</sup> (Note: The section “I Identify With and Have Accepted...” [Section 4, Part 1, E] was factor analysed on its own and resulted in four factors which are here presented as factors D22-D25. Eigen values and percent of total variance is only for comparison within these four factors.)

(Eigen Value: 4.894. Percent of Total Variance of 4 factors: 48.9%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Cultural patterns of dress, housing, food, etc (living like the people) (Q.9)	3.38	.901
2. Responding to people’s approval/disapproval (Q.10)	3.80	.725

Factor 15: (D23) Identification with Traditional, Personal, and Interpersonal Values

(Eigen Value: 1.227. Percent of Total Variance of 4 factors: 12.3%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Values of the culture arising from traditions (Q.7)	2.91	.859
2. Values of the culture related to honour and self-respect (Q.6)	2.95	.723
3. Social patterns of inter-personal relationship (Q.8)	3.23	.453

Factor 16: (D24) Identification with Social Communication Patterns

(Eigen Value: .941. Percent of Total Variance of 4 factors: 9.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Patterns by which people handle conflict (Q.1)	3.11	.866
2. Use of acceptable and effective media methods (Q.3)	3.21	.683
3. Oral communication patterns (Q.2)	3.30	.678

<sup>47</sup>Variable complexity of variables *I Identify With and Have Accepted...* averages 1.835 (orthogonal solution) and 1.589 (oblique solution). The total matrix sampling adequacy is .868. Bartlett’s Test of Sphericity is DF:54 and the Chi Square value is 432.898 (p=.0001). The following table indicates that all factors appear to have been extracted since all factor to factor correlations are below .50.

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1			
Factor 2	.232	1		
Factor 3	.307	.328	1	
Factor 4	.268	.076	.213	1

Factor 17: (D25) Identification with Social Role Values

(Eigen Value: .607. Percent of Total Variance of 4 factors: 6.1%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Values related to male and female roles and status (Q.5)	2.77	.898
2. Patterns related to authority, decision-making, and individualism (Q.4)	2.87	.544

Factor 18: (D26) Enjoyment of Social Activities/Interaction<sup>48</sup> (Note: The section “I Know How and Enjoy...” [Section 4, Part 1, F] was factor analysed on its own and resulted in three factors which are here presented as factors D26-D28. Eigen values and percent of total variance is only for comparison within these three factors.)

(Eigen Value: 4.806. Percent of Total Variance of 4 factors: 60.1%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Enjoy acting politely and “correctly” in social interaction (Q.1)	3.82	.909
2. Enjoy expressing cultural customs in my behaviour (Q.2)	3.77	.768
3. Enjoy joking and teasing relationships with nationals (Q.3)	3.90	.528

Factor 19: (D27) Enjoyment of National Recreational Activities

(Eigen Value: .904. Percent of Total Variance of 4 factors: 11.3%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Enjoy balancing “work” and “play” the way nationals do (Q.6)	3.08	1.033
2. Enjoy going to various recreational places (parks, stadia, concerts, etc.) (Q.5)	3.57	.859
3. Enjoy participating in traditional ceremonies with national friends (Q.4)	3.44	.672
4. Enjoy learning from mentors in the culture (Q.7)	3.66	.556

Factor 20: (D28) Enjoyment of National Arts/Hobbies

(Eigen Value: .623. Percent of Total Variance of 4 factors: 7.8%. Factor direction-negative)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Enjoy playing instrument, painting, making pottery, etc. (Q.8)	2.77	.922

The *acculturation scale* has four sets of three factors and two sets of four factors covering cognitive, affective, and behavioural dimensions of acculturation. The cognitive factors include 1) Factual Knowledge of the Culture, 2) Understanding of the Culture, and 3) Insight into the Culture. The first of these, “Factual Knowledge of the Culture”

<sup>48</sup>Variable complexity averages 1.498 (orthogonal solution) and 1.286 (oblique solution). The total matrix sampling adequacy is .878. Bartlett’s Test of Sphericity is DF:35 with a Chi Square value of 436.894 (p=.0001). The following table indicates that not all factors may have been extracted since most factor to factor correlations are above .50; however, extraction appears to have been adequate.

	Factor 1	Factor 2	Factor 3	
Factor 1	1			
Factor 2	.636	1		
Factor 3	.539	.487	1	



resulted in three factors with 76.1% of the variance: *Factual Knowledge of Economic and Political Structures*, *Factual Knowledge of Belief Structures*, and *Factual Knowledge of Sociological Structures*. The “Understanding of the Culture” set resulted in three factors with 76.1% of the variance: *Understanding of Cultural Ethos and Social Structure*, *Understanding of Cultural Economic and Political Structure*, and *Understanding of Historical Influence on Culture*. The “Insight into the Culture” set also resulted in three factors with 76.9% of the variance within that set: *Insight into the Culture’s Personality*, *Insight into Communicating through Accepted Structures*, and *Insight into Cultural Values*.

The affective component has three levels. The first level (four factors with 75.6% of the variance in the set) includes: 1) *Appreciation for Social Role Values*, 2) *Appreciation for Fine Arts*, 3) *Appreciation for Social Customs*, and 4) *Appreciation for Language*. The second level (four factors with 76.7% of the variance in the set) includes: 1) *Identification with Acceptable Social Fit*, 2) *Identification with Cultural Personal and Interpersonal Values*, 3) *Identification with Social Communication Patterns*, and 4) *Identification with Social Role Values*. Finally, the third level of the affective component (which is also in many respects the first level of the behavioural component, the other two levels having been included in the “Intercultural Ministry Skills” Scale) is the set “I Know How and Enjoy....” The three factors in this level (with 79.2% of the variance within the set) include: 1) *Enjoyment of Social Activities/Interaction*, 2) *Enjoyment of National Recreational Activities*, and 3) *Enjoyment of National Arts/Hobbies*.

Factors scales were developed and the sample size, mean, median, standard deviation, range, skewness for each factor are presented in Table 31. The mean and standard deviations on all these scales is fairly consistent. Standard deviation and skew, interestingly, were greater on cognitive acculturation than on either affective or behavioural dimensions. Highest skew was a negative orientation in “factual knowledge of belief structures” followed by a negative skew in “understanding of history’s influence on the culture.” The largest range of differences between subjects was in “factual knowledge of sociological structures,” ‘insight into the culture’s personality,’ and “insight into cultural values and beliefs” (all over 9.0), each one significantly important to the task of a missionary.

Table 31: Item Statistics for the Dependent “Acculturation” Factors

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (D9) Factual Knowledge of Economic and Political Structures							
91	-0.00007	-0.08000	1.4807	6.9110	-3.2740	3.6370	0.00626
Factor 2: (D10) Factual Knowledge of Belief Structures							
91	0.00003	0.01100	1.3280	7.9100	-5.4010	2.5090	-0.97276

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 3: (D11) Factual Knowledge of Sociological Structures							
91	0.00000	0.18400	1.5966	9.1760	-4.8000	4.3760	0.04689
Factor 4: (D12) Understanding of Cultural Ethos and Social Structure							
91	-0.00003	0.03300	1.4104	7.5590	-3.9400	3.6190	-0.17302
Factor 5: (D13) Understanding of Cultural Economic and Political Structure							
91	-0.00008	0.06500	1.3273	6.2100	-3.3660	2.8440	-0.27200
Factor 6: (D14) Understanding of History's Influence on Culture							
91	0.00005	0.12700	1.4386	8.8590	-5.5710	3.2880	-0.79302
Factor 7: (D15) Insight into the Culture's Personality							
91	-0.00001	0.19000	1.5379	9.6220	-5.0160	4.6060	-0.47050
Factor 8: (D16) Insight into Communicating through Accepted Structures							
91	0.00000	0.02100	1.2632	6.5110	-3.6200	2.8910	-0.48992
Factor 9: (D17) Insight into Cultural Values/Beliefs							
91	0.00003	-0.24300	1.6865	9.9880	-5.0400	4.9480	0.39470
Factor 10: (D18) Appreciation for Social Role Values							
91	0.00005	-0.13200	1.2495	5.6420	-2.6890	2.9530	0.17079
Factor 11: (D19) Appreciation for Cultural Fine Arts							
91	0.00001	0.12900	1.1533	5.6470	-3.1050	2.5420	-0.18962
Factor 12: (D20) Appreciation for Social Customs							
91	-0.00003	0.22400	1.3493	7.2520	-3.9550	3.2970	-0.50618
Factor 13: (D21) Appreciation for Language							
91	-0.00004	-0.04800	1.1510	5.3670	-2.7450	2.6220	-0.08286
Factor 14: (D22) Identification with Acceptable Social Fit							
91	0.00002	0.15600	1.0884	4.6200	-2.6100	2.0100	-0.61108
Factor 15: (D23) Identification with Traditional, Personal, and Interpersonal Values							
91	-0.00000	0.06600	1.0703	4.7100	-2.3280	2.3820	0.02147
Factor 16: (D24) Identification with Social Communication Patterns							
91	-0.00001	0.08200	1.1052	5.5170	-3.1760	2.3410	-0.24638
Factor 17: (D25) Identification with Social Role Values							
91	0.00003	0.03700	1.0490	5.8490	-3.3970	2.4520	-0.33497
Factor 18: (D26) Enjoyment of Social Activities/Interaction							
91	-0.00003	0.11800	1.3788	7.4660	-3.6020	3.8640	-0.31932
Factor 19: (D27) Enjoyment of National Recreational Activities							
91	-0.00009	0.08600	1.3294	7.2800	-3.6850	3.5950	-0.02157
Factor 20: (D28) Enjoyment of National Arts/Hobbies							
91	0.00001	-0.04700	1.2177	5.5030	-2.6540	2.8490	0.00156



Factor Analysis of Self-Rated Dependent Variables. “Intercultural Ministry Skills”

Initially the “Contextualization of Work” Scales ( Section 4, Part 2) had been factor analyzed with the “General Questions” variables above but were so dominant that every variable in that section came through as a primary factor “Intercultural Ministry Skills” (at 35% of the variance). Consequently, it was decided to factor analyze them separately, since they are actually specific measurements related to “General Questions” Factor 1 (variables 3, 4, 5, and 6), Factor 3 (variables 4 and 5), Factor 7 (variables 1, 2, 3, and 4) and Factor 9 (variables 2 and 5) above. Furthermore, these “intercultural ministry skills” are further levels of behavioural acculturation and therefore are also related to the “Acculturation Scale.”

Again these variables are rich in complexity, each being able to account for more than one factor.<sup>49</sup> The average is 1.702 (orthogonal solution) and 1.724 (oblique solution). The total matrix sampling adequacy is .933 indicating a homogeneous collection of variables suitable for factor analysis.<sup>50</sup> Bartlett’s Test of Sphericity<sup>51</sup> (DF:230) and a Chi Square value of 1664.592 which is significant at the .0001 level are considerably above the 0 level and indicate that these factors do not likely occur as a function of chance. Because an oblique solution is being utilized, primary factor intercorrelations were computed.<sup>52</sup> Factor extraction was based on a criterion of Roots (eigenvalues) greater than or equal to 1.

<sup>49</sup>The following chart of variable complexity has factor density identified by both orthogonal and oblique solutions. The oblique solution reduces the complexity. In the table each variable is followed first by the orthogonal average and then by the oblique average. The complexity of these variables is shown in that simple factor density should be at 1.000.

AdaptArgue	1.343	1.134	NonVerbCom...	1.181	1.904	DecisionMak.	1.406	1.580
Homog.Units	2.375	2.300	Fam.Link.	2.202	2.774	NewConcepts	1.803	1.416
Ident.Ldrs.	1.396	1.425	ValueChange	1.566	1.158	FeltNeeds	1.084	1.542
EqualInteract.	1.740	1.117	Comfort	1.631	1.039	IntegrateTruth	1.839	2.434
Bib.Ch.Struct.	1.498	1.610	WorkW/Nat...	2.300	1.072	MoniterMin.	1.514	1.342
Comm.Bib.Tr...	1.287	1.772	App.Cult.Defs.	1.386	2.251	Nats.FitWork	1.203	3.049
UseAnalogies	1.189	2.621	Dev.Nat.Ldrs.	2.422	1.608	ChurchDev.	3.380	1.064

<sup>50</sup>The measures of variable sampling adequacy for each item shows that all are considerably above the .50 level and therefore substantially high enough for factor analysis.

AdaptArgue	.939	NonVerbComm.	.961	DecisionMak.	.932	Homog.Units	.897
Fam.Link.	.92	NewConcepts	.936	Ident.Ldrs.	.942	ValueChange	.937
FeltNeeds	.945	EqualInteract.	.909	Comfort	.918	IntegrateTruth	.95
Bib.Ch.Struct.	.951	WorkW/NatL...	.909	MoniterMin.	.94	Comm.Bib.Tr...	.933
App.Cult.Defs.	.925	Nats.FitWork	.953	UseAnalogies	.944	Dev.Nat.Ldrs.	.898
ChurchDev.	.905						

<sup>51</sup>A multivariate analog of the statistical test frequently applied to a single correlation coefficient to see if it is significantly different from 0.

<sup>52</sup>All of these are above the .50 level, yet are close enough to suggest that factors have been sufficiently extracted.

	Factor 1	Factor 2	Factor 3
Factor 1	1		
Factor 2	.624	1	
Factor 3	.692	.669	1

**Table 32: Results of Factor Analysis on Self-Rated Dependent Variables  
“Intercultural Ministry Skills”  
(Section 4, Part 2, A and B)**

**Factor 1: (D29) Cultural Involvement and Research Skills**

(Eigen Value: 11.967. Percent of Total Variance: 57%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. “Equal” rather than “fatherly” interaction with nationals (A.10)	3.99	.903
2. Comfortable with the culture (A.11)	3.63	.847
3. Able to discriminate homogeneous groups of people in the culture (A.4)	3.62	.698
4. Comfortable with cultural forms of decision-making (A.3)	3.20	.637
5. Understand content and value of cultural definitions of moral standards (B.6)	3.47	.536

**Factor 2: (D30) Contextualized Church Development Skills**

(Eigen Value: 1.313. Percent of Total Variance: 6.3 %. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Working to develop national leaders able to apply Bible to culture (B.9)	3.57	.942
2. Working to see church developed so can move on to new ministry (B.10)	3.98	.914
3. Use cultural metaphors for church development (B. 8)	2.93	.597
4. Study, consult, self-evaluate to make sure ministry fits context (B.4)	3.11	.568
5. Nationals adapting my work, fitting to their own system (B.7)	3.41	.563
6. Know form of Ch. structure which is Biblical and attractive to nats. (B.2)	3.18	.560
7. Effective communication of Bib. truth to thought patterns of culture (B.5)	3.45	.545
8. Work well in partnership with or work well under national leadership (B.3)	3.92	.529
9. Concern nationals integrated Bib.truth to own system of functioning (B.1)	3.60	.484

**Factor 3: (D31) Change-Agent Skills**

(Eigen Value: 1.066. Percent of Total Variance: 5.1 %. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Able to introduce new concept into commun. through approp. channels (A.6)	2.97	.945
2. Can describe changes in cultural values and why changes taking place (A.8)	2.80	.877
3. Able to adapt an argument to national attitudes and values (A.1)	3.38	.806
4. Able to identify unofficial local leaders (A.7)	3.10	.763
5. Can utilize family linkages for ministry contacts (A.5)	3.53	.600
6. Able to relate to individual and cultural felt needs for ministry (A.9)	3.11	.575
7. Effective use of non-verbal communication (A.2)	3.47	.566

Three factors emerged with 68.4% of the total variance. The first factor, (57% of the variance) has to do with *research skills* which are culturally involved (“participant observation” type research). The second factor (6.3% variance) resulted in variables related to *contextualized church development*. Factors 3 (5.1% variance) relates to *change-agent skills*.



As with the general question above, factors scales were developed and the sample size, mean, median, standard deviation, range, and skewness for each factor computed. These are presented in Table 33. The three factors are symmetrical with slight negative skew.

Table 33: Item Statistics for the Dependent Factors of the “Intercultural Ministry Skills” Scale

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (D29) Cultural Involvement and Research Skills							
91	0.00000	-0.12400	1.4527	7.5350	-4.2380	3.2970	-0.25684
Factor 2: (D30) Contextualized Church Development Skills							
91	0.00005	-0.00300	1.4100	9.1230	-5.4220	3.7010	-0.69393
Factor 3: (D31) Change-Agent Skills							
91	0.00002	0.15300	1.5273	8.0630	-3.9080	4.1550	-0.29781

Factor Analysis on Colleague-Rated Dependent Variables

Factor analysis (again using Principal-components factor analysis but with orthogonal rather than oblique rotation) was done on the dependent variables (Personal Ministry Statements, questions 14-21) from the missionary colleague forms. Sampling adequacy was sufficiently high<sup>53</sup> at .854 with a Bartlett Test of Sphericity at 35 (DF) and a Chi Square value of 287.143 significant at an .0001 level. Variable complexity is again higher than the ideal simple structure of 1, but not as high as with the self-rated forms, resulting in the likelihood of fewer factors and less overlap of variables factor to factor.<sup>54</sup>

Table 34: Results of Factor Analysis on Missionary Colleague-Rated Dependent Variables Intercultural Ministry Skills

Factor 1: (MD1) Contextualization of Ministry

(Eigen Value: 3.889. Percent of Total Variance: 48.6%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Concern with training nationals (Q. 19)	3.71	.827
2. Studies culture/seek advice from Brazilians and missionaries (Q. 14)	3.61	.768
3. Seeks to make ministry fit cultural and sociological context (Q. 20)	3.88	.618

<sup>53</sup>The measures of variable sampling adequacy for each item shows that all are considerably above the .50 level.

StudyCult.	.857	InteractBraz.	.801	Ed.Min.	.824	Braz.Ways	.720
Commit.Min	.824	TrainNats.	.888	Min.Fit.Cult	.794	Form.Strats.	.862

<sup>54</sup>The following chart of variable complexity has factor density identified by both orthogonal and oblique solutions. The oblique solution reduces the complexity. In the table each variable is followed first by the orthogonal average and then by the oblique average.

StudyCult.	1.463	1.180	InteractBraz.	2.587	2.355	Ed.Min.	1.108	1.011
Braz.Ways	1.118	1.005	Commit.Min	1.111	1.035	TrainNats.	1.341	1.225
Min.Fit.Cult	2.046	1.879	Form.Strats.	2.453	1.925	Average	1.653	1.452

Factor 2: (MD2) Commitment to Creative/Viable Ministry

(Eigen Value: 1.059. Percent of Total Variance: 13.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Commitment to ministry (Q.18)	4.08	.899
2. Ability to formulate credible and workable strategies (Q.21)	3.54	.575

Factor 3: (MD3) Adequate Ministry Education/Training

(Eigen Value: .766. Percent of Total Variance: 9.6%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Demonstrates adequate training for ministry (Q.16)	4.07	.947

Factor 4: (MD4) Active Acculturation

(Eigen Value: .676. Percent of Total Variance: 8.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. This person very Brazilian in ways of thinking and doing (Q.17)	2.86	.972
2. Interacts with Brazilians in many situations; Brazilian friends (Q.15)	3.89	.498

These four factors identified 79.8% of the total variance. Factor 1 (with 48.6% of the variance) was “contextualization of ministry”; factor 2 (13.2% of the variance) related to “research investment in ministry” (that is, the combination of commitment to ministry and skills in forming effective strategies); factor 3 (with 9.6% of the variance) was the adequacy of a missionary’s “ministry education/skills”; and factor 4 (8.4%) was “acculturation” (the extent to which the individual has become like a national in ways of thinking and doing things). The mean, median, standard deviation, range, and skew of the scales from all subjects on each factor are in Table 34. All factors are fairly symmetrical except for factor 3, *Ministry Education/Training* which has a notable negative skew.

Table 35: Item Statistics for the Missionary Colleague-Rated Dependent Factors of the “Intercultural Ministry Skills” Scale

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (MD1) Contextualization of Ministry							
91	0.00003	0.15400	1.1631	4.9690	-2.7060	2.2630	-0.36926
Factor 2: (MD2) Commitment to Creative/Viable Ministry							
91	-0.00002	0.04600	1.0912	7.2190	-4.0260	3.1930	-0.49779
Factor 3: (MD3) Adequate Ministry Education/Training							
91	-0.00002	0.09600	1.0467	6.1480	-4.3550	1.7930	-1.4894
Factor 4: (MD4) Active Acculturation							
91	0.00001	0.07100	1.0872	5.6240	-2.6020	3.0220	-0.03192



Factor Analysis of National-Rated Forms

Using the same process as above, the national-rated forms were factor analyzed in two sections: 1) questions 1-4 from Section 1 as well as questions 22 and 23 from Section 2 (factors 1-3 in Table 36); and 2) question 5 from Section 1 with questions 1-21 from Section 2 (factors 4-13 in Table 36). Total number of variables factor-analysed from the national-rated questionnaire was 28. Twelve factors resulted, three in the first set and nine in the second.

Table 36: Results of Factor Analysis on National-Rated Dependent Variables

Factor 1: (ND1) Adjustment to Culture and Ministry<sup>55</sup> (Note: This section [Part 1 of the national-rated Questionnaire and Questions 22-23 of Part 2] was factor analysed on its own and resulted in three factors which are here presented as factors ND1-ND3. Eigen values and percent of total variance is only for comparison within these three factors.)

(Eigen Value: 2.854. Percent of Total Variance of 3 factors: 47.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Compared to other missionaries, well adapted to living in culture (Part 1, Q.1)	4.28	.875
2. Compared to others, well identified with people and culture (P1,Q.2)	3.91	.862
3. Compared to others, the family is well adapted to living in the culture (P1,Q.3)	4.14	.674

Factor 2: (ND2) Ministry Effectiveness

(Eigen Value: 1.212. Percent of Total Variance: 20.2%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Compared to others, effective at handling ministry responsibil. (Part 1, Q.4)	4.43	.905

Factor 3: (ND3) Psychological Health

(Eigen Value: .71. Percent of Total Variance: 11.8%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. This person shows by actions that s/he is happy in his/her work (P. 2, Q.22)	4.50	.918
2. This person is perceived as a good and “godly” person by others (P.2, Q.23)	4.65	.830

<sup>55</sup>Variable complexity of this section averages 1.241 (orthogonal solution) and 1.144 (oblique solution). The total matrix sampling adequacy is .666. Bartlett’s Test of Sphericity is DF:20 and the Chi Square value is 169.753 (p=.0001). All factors appear to have been extracted since most factor to factor correlations are below .50.

**Factor 4: (ND4) Concern for Contextualizing Ministry**<sup>56</sup> (Note: This section [Part 2 of the national-rated Questionnaire and Part 1, Q.5] was factor analysed on its own and resulted in nine factors which are here presented as factors ND4-ND12. Eigen values and percent of total variance is only for comparison within these nine factors.)

(Eigen Value: 10.86. Percent of Total Variance of 9 factors: 49.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Spends time with people to study cultural ways of doing things (Q.9)	3.41	.853
2. Seeks advice from national co-workers, ch. leaders, and missionaries (Q.17)	3.75	.688
3. Is concerned that ministry fits socio-cultural context (Q.21)	3.95	.574

**Factors 5: (ND5) Adaptation to Cultural Patterns of Thinking/Communicating**

(Eigen Values of both: 1.299. Percent of Total Variance of 9 factors: 5.9%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Enjoys cultural art, literature, and traditions (Q.7)	3.24	.760
2. Follows acceptable ways of communicating with all levels of society (Q.6)	4.08	.733
3. Has good social manners (Q.8)	4.36	.729
4. Able to use non-verbal communication effectively (Q.2)	3.74	.744
5. Uses cultural patterns of thought for communicating Biblical truth (Q.16)	3.92	.416

**Factor 6: (ND6) Involvement with Culture and People**

(Eigen Value: 1.076. Percent of Total Variance of 9 factors: 4.9%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Participates in traditional ceremonies with national friends (Q.13)	3.62	.820

<sup>56</sup>Total average matrix sampling adequacy was high at .888 (Bartlett Test of Sphericity--DF: 252; Chi Square: 1325.998; P: .0001). Variable complexity is very rich, averaging 2.497 (orthogonal average) and 2.499 (oblique average) meaning that most of these variables will be defined by more than one factor. The “sum of variance of 75%” factoring method yielded 7 factors while both Cattell’s root curve analysis (see R.B. Cattell, “The Scree Test for the Number of Factors,” Multivariate Behavioral Research 1:2, 1966, p.245) and the criterion of roots greater than 1 both resulted in 3 factors. With each of these methods, however, because of the rich variable complexity, the three factors were too compressed and difficult to interpret, while the seven showed intercorrelations that were considerably higher than .50. Forcing a factor analysis of 9 reduced most factor to factor intercorrelations below the .50 level which is acceptable for oblique solution factoring (see table below).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Factor 1	1								
Factor 2	.509	1							
Factor 3	.344	.296	1						
Factor 4	.491	.418	.266	1					
Factor 5	.542	.456	.342	.453	1				
Factor 6	.330	.446	.188	.277	.270	1			
Factor 7	.372	.479	.285	.345	.347	.323	1		
Factor 8	.554	.517	.303	.420	.571	.392	.422	1	
Factor 9	.241	.270	.197	.166	.258	.198	.271	.2	1



**Factor 7: (ND7) Psychological Acceptance of People and Culture**

(Eigen Value: .966. Percent of Total Variance of 9 factors: 4.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Does not disparage or “put down” nationals or their culture (Q.19)	3.79	1.022

**Factor 8: (ND8) Skills for Developing Nationals**

(Eigen Value: .898 Percent of Total Variance of 9 factors: 4.1%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Concern with developing nationals (Part 1, Q.5)	4.24	.924
2. Able to adapt arguments to nationals attitudes and values (Q.14)	3.70	.505
3. Concern for training nationals (Q.20)	4.09	.390
4. Knows and utilizes decision-making patterns of the culture (Q.5)	3.23	.365

**Factor 9: (ND9) Knowledge of Country and Language**

(Eigen Value: .857. Percent of Total Variance of 9 factors: 3.9%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Able to communicate effectively in common language of the people (Q.1)	3.99	.785
2. Factual knowledge of the country (history, econ., polit., etc.) (Q.4)	3.44	.622

**Factor 10: (ND10) Conflict Resolution Skills**

(Eigen Value: .783. Percent of Total Variance of 9 factors: 3.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Understands how to resolve conflict in culturally acceptable ways (Q.10)	3.81	.750

**Factor 11: (ND11) Skills in Interpersonal Relationships**

(Eigen Value: 1.241. Percent of Total Variance of 9 factors: 3.4%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Understands religious beliefs of the people (Q.3)	3.81	.673
2. Works well with national church leaders (Q.15)	4.19	.593
3. Has joking and teasing relationships with nationals (Q.12)	4.16	.518
4. Has national friends; interacts well with nationals (Q.18)	4.17	.421

**Factor 12: (ND12) Adaptation to Cultural Life-style**

(Eigen Value: .756. Percent of Total Variance of 9 factors: 3.0%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Follows cultural patterns of dress, food, housing, transport, etc. (Q.11)	3.52	.749

The first three factors listed above (and analyzed as a set) accounted for 79.6% of the variance within that set, while factors 4-12 together accounted for 82.6% of the total variance

of that set. The first three factors related to *cultural adjustment* (factor 1: 47.6%), *perceived ministry effectiveness* (factor 2: 20.2%), and *psychological health* (factor 3: 11.8%).

In the second set, *Contextualization of Ministry* logically had the greatest variance (49.4%), as this would be the greatest concern to nationals, *vis a vis* their primary area of interaction with missionaries in ministry. Five factors with a combined variance of 22.1% related to acculturation: factor 5, *Adaptation to Cultural Patterns of Thinking/Communicating*; factor 6, *Involvement with Culture and People*; factor 7, *Psychological Acceptance of People and Culture*; factor 9, *Knowledge of Country and Language*; and factor 12, *Adaptation to Cultural Life-style*. The other three factors have to do with interpersonal interaction: factor 8, *Skills for Developing Nationals*; factor 10, *Conflict Resolution Skills*, and factor 11, *Skills in Interpersonal Relationships*.

The mean, median, standard deviation, range, and skew of the scales of all subjects on each factor are in Table 37. All factors are fairly symmetrical except for factor 2, *Ministry Effectiveness*, which has a negative skew of -1.1944.

Table 37: Item Statistics for the Dependent Factors, National-Rated “Intercultural Ministry Skills”

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (ND1) Adjustment to Culture and Ministry							
83	-0.00004	0.08200	1.0929	4.5300	-2.4780	2.0520	-0.47156
Factor 2: (ND2) Ministry Effectiveness							
83	0.00011	0.26500	1.0619	5.6230	-3.7650	1.8580	-1.1944
Factor 3: (ND3) Psychological Health							
83	-0.00001	0.25900	1.0944	4.7550	-2.7570	1.9980	-0.59601
Factor 4: (ND4) Concern for Contextualizing Ministry							
83	0.00004	0.27500	1.3677	7.4470	-4.0750	3.3720	-0.69411
Factors 5: (ND5) Adaptation to Cultural Patterns of Thinking/Communicating							
83	-0.00004	0.16700	1.3513	7.6870	-4.8360	2.8510	-0.68672
Factor 6: (ND6) Involvement with Culture and People							
83	0.00005	0.10300	1.1046	5.6240	-3.0660	2.5580	-0.28193
Factor 7: (ND7) Psychological Acceptance of People and Culture							
83	-0.00002	0.20000	1.2178	6.2660	-3.2160	3.0500	-0.47112
Factor 8: (ND8) Skills for Developing Nationals							
83	0.00005	0.07000	1.3439	6.0370	-3.0970	2.9400	-0.18285
Factor 9: (ND9) Knowledge of Country and Language							
83	-0.00002	-0.08400	1.1535	6.4140	-2.8320	3.5820	0.25456



n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 10: (ND10) Conflict Resolution Skills							
83	-0.00000	0.04900	1.2053	6.5680	-3.1800	3.3880	0.33110
Factor 11: (ND11) Skills in Interpersonal Relationships							
83	-0.00002	-0.13700	1.3867	6.4850	-2.9410	3.5440	0.13382
Factor 12: (ND12) Adaptation to Cultural Life-style							
83	-0.00002	0.08200	1.0702	5.2470	-2.6140	2.6330	-0.20238

In summary, four sets of data (self-rated general questions, self-rated “ministry skills” questions, missionary colleague-rated questions, and national-rated questions) resulted in 47 dependent scales representing empirical measures of success in the specific areas under question: acculturation, socialization, contextualization of ministry, and ministry skills. These 47 scales will be later compared with scales developed from the independent scales to discover what relationships may exist between the two.

Independent Variable Data Analysis

Independent variables here refer to those variables which are related to *prediction* of cross-cultural ministry competence. Questions on individual characteristics (traits), educational training/readiness, personal development, spiritual dynamic, and pre-field and on-field ministry and life expectations were used to measure these predictive variables. Item statistics (means and standard variations) will first be done on self-rated questions, then missionary colleague-rated and national-rated forms, followed by Principal Components factor analysis and the development of factor scales.

Item Statistics:

Two self-rated questionnaires with a total of 47 variables were based on a 1-5 point Likert-type measuring system. Each of these were written with high ratings at the high end of the scale (“5”) and low ratings at the low end of the scale (“1”). These include the Personal Expectations Scale and the Personal Dimensions Scale. Table 38 shows item by item means and standard deviations for these two Likert-type scales.

The Language Proficiency Scale and the Spiritual Dynamics Scale have a variety of formats, from the ten levels of the FSI (Language Proficiency) scale to three point and five point scales in the Spiritual Dimensions Scale. In the item by item analysis table (Table 39) on these scales only the number of ratings per question will be identified along with the means and standard deviations. Essentially, these scales are more precise measurements of some of the factors in the Personal Expectations Scale and the Personal Dimensions Scale. Note that especially in the Spiritual Dimensions Scale, the order has often been changed to conform to a consistent pattern of low ratings kept to the low end of the scale (beginning with

“1”) and going up to high ratings at the high end (“5”) of the scale. In some instance “uncertain” has been retained as a rating between “no” and “yes” because it does not mean the answer is not known (and therefore should be eliminated) but that it depends on circumstances or that it lies somewhere between “no” and “yes” without such clear-cut answers.

Independent variable scales include a total of 97 variables (since only the “real values” as opposed to the “ideal” in the Spiritual Dimensions will be used, as well as one question from “General Education” (Section 1, Part 3, Question 17) and three from “Social Dimensions” (Section 6, Part 5, questions 6, 16, and 17 on education). Item by item means and standard deviation for the Personal Dimensions Statements (Questions 1-13) from missionary colleagues and two questions from the national-rated questionnaire (questions 22 and 23) appear in Table 40.

Item statistics on self-rated *Personal Expectations* show a sample that was highly positively oriented before overseas departure, found their expectations to have been positively fulfilled, and continue to have very positive expectations for the future. The majority of distributions (9 out of 13) are over the 4.0 level on a five-point scale showing a high positive skew. The Personal Dimensions Scale has a more balanced distribution with only 6 over the 4.0 level and 3 under the 2.0 level. There is, however, greater diversity in this scale, which is to be expected since personality characteristics are in view.

There is also satisfactory distribution in the *Ministry Skills Growth Scale* (except for a low mean in “ability to research”) though standard deviations are quite high, all hovering around 1.0. Distributions in the *Personal Growth Scale* have balanced means, though standard deviations again are fairly high. The vast majority perceived positive growth in all areas of life; a few had negative growth (as the item statistics in footnote 65 show). Because there are so few in the negative area (levels 1-5), the footnote scale should essentially be read from levels 6-10 (the mean). To reflect this, the scale in the text has been rewritten to a five-point scale, with all negatives placed at 1 to reflect little or no growth. Rewriting it this way also enable this scale to be included in factor analysis without the skew that the 10-point scale produced.

The *Spiritual Dimensions: Ideal Values Scale* shows a significantly homogeneous sample with a consistently high distribution and low standard deviation. All but two three-point items have nearly a 3.0 means (except “Readiness to face persecution”) and all but two five-point items have a mean that is over 4.0<sup>57</sup>. The belief and value structures of the sample are significantly consistent. On the other hand, the *Spiritual Dimensions: Real Values Scale*

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<sup>57</sup>#21 is too different from the others to be included.



returns to a distribution that does not go over 4.0 or under 2.0. Note that standard deviations are fairly even (except for #10 “time spent in prayer” which has a high SD).

The *Language Proficiency Scale* has a higher mean, and this means that the proficiency of the majority is at a 3 or higher level on the FSI, which one would expect of missionaries who have been on the field for more than 4 years, after having taken one or two years of language training. In fact, the mean should probably be higher for language proficiency! It is interesting to note that while only a little over half of the sample have clear language learning goals, the majority (all but five) felt they were making some or steady learning progress.

Missionary colleagues tended to rate subjects quite highly, though only 2 was over the 4.0 level (#9--persistence and #12--communication with family). None were under 2.0, though one came close (question 11, wherein missionaries rated their subjects low on frankness, high on tactfulness). Only three items had standard deviation distributions over 1.0. Nationals rated their subjects very highly on perceived satisfaction with life and work and perceived subject “godliness of life.” Both were over 4.0 on the mean and under .75 in standard deviations.

Table 38: Item Statistics for Self-Rated Independent Variables  
“Personal Development” and “Personal Dimensions”

Personal Expectations Scale (Section 6, Part 2)								
Item	1	2	3	4	5 <sup>58</sup>	n <sup>59</sup>	Mean	SD
1. Expected. min. rewarding	1	0	1	38	49	90	4.4664	.7333
2. Expectations fulfilled	4	5	1	51	28	89	4.0574	.9703
3. Family prepared beforehand	1	1	8	52	23	85	4.1210	.6899
4. Family has adjusted	0	2	5	42	35	84	4.3135	.6664
5. Concerned would have trouble	21	43	4	14	7	89	2.3593	1.2133
6. Problems more than good ex.	40	40	0	8	3	91	1.8352	1.0356
7. Never doubted would do well	4	31	6	35	15	91	3.2857	1.2228
8. Have done well	1	5	6	48	30	90	4.1222	.8410
9. Distress re. child ed./separ.	13	33	6	22	3	85	2.5897	1.0881
10. Child. adapt schooling	0	2	1	44	25	72	4.2565	.5637
11. Spouse adapt schooling	0	1	4	41	24	70	4.2383	.5526
12. Sense of well being	1	5	5	54	21	86	4.0359	.7810
13. Positive expectations-future	1	5	6	52	27	91	4.0879	.8253

<sup>58</sup>1=Strongly Disagree; 2=Disagree; 3=No Opinion; 4=Agree; 5=Strongly Agree. This itemizes the number of responses per scale level.  
<sup>59</sup>Actual number of respondents on each item.

**Personal Dimensions Scale (Section 6, Part 4)**

Item	1	2	3	4	5 <sup>60</sup>	n <sup>61</sup>	Mean	SD
1. Friendly person	0	0	2	67	22	91	4.2198	.4667
2. 1st to act/make suggestions	1	33	9	44	3	90	3.1658	1.0028
3. Interested in alternative view	2	11	12	62	4	91	3.6044	.8417
4. Decision-analyse all factors	0	8	11	59	12	90	3.8338	.7638
5. Plans usually work	0	11	11	62	7	91	3.7143	.7787
6. Prefer same type people	0	16	9	63	3	91	3.5824	.8174
7. Don't persist w/frust. task	8	53	5	25	0	91	2.5165	.9929
8. Prefer talking to listening	6	48	15	21	1	91	2.5934	.9543
9. Spend enough time in prayer	6	59	12	13	1	91	2.3846	.8534
10. Show interest in others	0	14	12	56	8	90	3.6448	.8474
11. Issues have clear answers	5	50	11	25	0	91	2.6154	.9518
12. Cautious/don't take risks	0	14	5	67	5	91	3.6923	.7985
13. Politics-must be prudent	0	0	6	63	20	89	4.1565	.5143
14. Have found sit./hard to cope	0	25	7	48	11	91	3.4945	1.0260
15. Retain emotional control	1	19	6	62	2	90	3.4999	.8851
16. Reject many foreign things	2	41	6	38	3	90	2.9883	1.0488
17. Speak out against "wrong"	3	38	8	40	1	90	2.9765	1.0218
18. Often lack confidence	2	51	9	27	1	90	2.7116	.9574
19. Never hesitate to speak mind	6	64	6	14	0	90	2.3114	.8117
20. Let others take initiative	1	31	14	41	2	89	3.1343	.9568
21. Quality of spir. life important	1	10	17	52	10	90	3.6669	.8564
22. People consider me trustworthy	0	0	1	68	20	89	4.2140	.4339
23. Suffering can be sensed	2	12	12	57	7	90	3.6110	.8906
24. Prefer to be frank over tactful	9	51	4	23	2	89	2.5273	1.0445
25. Acknowledge/compliment	0	6	11	67	6	90	3.8113	.6480
26. Hard to hide feelings	1	24	6	53	6	90	3.4328	.9894
27. Decision--act quickly	3	45	9	30	2	89	2.8076	1.0097
28. Prefer work w/others	0	29	7	47	6	89	3.3377	.9994
29. No need to live by laws	42	44	1	0	2	89	1.6064	.7245
30. New ideas interfere	24	49	12	5	0	90	1.9775	.7885
31. Counsel problems	1	16	10	54	8	89	3.5845	.9166
32. Able to sense other's feelings	0	9	13	64	4	90	3.7002	.7063

<sup>60</sup>1=Strongly Disagree; 2=Disagree; 3=No Opinion; 4=Agree; 5=Strongly Agree. This itemizes the number of responses per scale level.

<sup>61</sup>Actual number of respondents on each item.



Item	1	2	3	4	5	n	Mean	SD
33. Many people I don't respect	5	47	18	20	0	90	2.5884	.8931
34. Often in conflict w/others	10	69	5	6	0	90	2.0779	.6537
35. Very close to spouse/family	0	3	11	53	16	83	3.9842	.6583
36. Ask Holy Spirit to guide	0	10	9	56	15	90	3.8450	.8288
37. Not 1st to suggest plan	2	36	9	43	0	90	3.0339	.9826
38. No need sensitive-politics	23	50	7	7	1	88	2.0124	.8628
39. Give up w/complications	13	67	1	8	0	89	2.0449	.7135
40. Be aware of local realities	1	0	2	64	23	90	4.1998	.5812
41. Commun. w/family difficult	18	58	2	5	0	83	1.9243	.6631
42. Like to finish tasks	0	13	6	60	11	90	3.7662	.8440
43. Spouse and I underst. each oth.	0	0	3	59	21	83	4.2142	.4726
44. Confident in my judgement	0	3	3	73	11	90	4.0219	.5370

Table 39: Item Statistics for Self-Rated Independent Variables  
“Growth of Ministry Skills,” “Personal Growth,” and “Spiritual Dimensions”

Ministry Skills Growth Scale (Section 2, Part 2)

Item	1	2	3	4	5 <sup>62</sup>	n <sup>63</sup>	Mean	SD
1. Bib/Theo. know. for the task	0	23	32	10	25	90	3.4113	1.1440
2. Integrate Bib.Kn. to ministry	1	38	19	19	14	91	3.0769	1.1375
3. Dev. gifts/skills for the task	3	21	34	20	13	91	3.2088	1.0595
4. Work well w/ others gifted	2	11	39	25	14	91	3.4176	.9669
5. Assess socio-cult. context	3	38	32	14	4	91	2.7582	.9109
6. Ability to research	13	51	18	5	4	91	2.2967	.9368
7. Formulate/apply strategies	2	36	30	16	8	91	2.9231	1.0026

<sup>62</sup>The instrument was written as a 6-point Likert-type scale, but two of the questions are almost identical, so in an effort to make this scale parallel with the others, levels two and three (“A little” and “Somewhat”) have been merged. 1=Hardly; 2=Somewhat; 3=Well; 4=Very well; and 5=Know how and could teach.

<sup>63</sup>Actual number of respondents on each item.

Personal Growth (Section 2, Part 1)<sup>64</sup>

Item	1	2	3	4	5 <sup>65</sup>	n <sup>66</sup>	Mean	SD
1. Intellectual development	2	9	39	28	10	88	3.3976	.8887
2. Spiritual development	4	2	23	26	16	91	3.7473	.9261
3. Emotional development	13	3	31	36	5	88	3.1763	1.0979
4. Interpersonal skills develop.	1	5	44	33	6	89	3.4265	.7437
5. Marital relation. develop.	5	3	29	35	9	81	3.4727	.9103
6. Develop of relat. w/children	4	9	26	38	5	82	3.3742	.8900
7. Communication skills dev.	4	6	30	33	14	87	3.5420	.9753
8. Develop. of self-confidence	13	8	33	29	7	90	3.0952	1.1367
9. Independence/control	12	10	36	24	5	87	2.9800	1.0687
10. Dev. of polit. opinions	20	13	20	13	4	70	2.4871	1.0970

Spiritual Dimensions: Ideal Values (Section 5)

Item and levels in scale	1	2	3	4	5 <sup>67</sup>	n <sup>68</sup>	Mean	SD
1. Dependence on God (Q.1)	0	4	87	-	-	91	2.9560	.2061
2. Burden for the lost (Q.3)	0	7	84	-	-	91	2.9231	.2680
3. Confidence in God's sovereign. (Q.5)	1	5	85	-	-	91	2.9231	.3066
4. Import. of holiness of life (Q.7)	0	10	81	-	-	91	2.8901	.3145

<sup>64</sup>Personal Growth was based on a ten-point scale--five negative and five positive values. This was too wide a scale for use in statistical analysis since the few extreme outliers had a disproportional influence. Consequently the scale was recoded to include all negatives as "1" or "very little." The following is the table of the 10-point scale. 1= --Very Much; 2= --Much; 3= --Some; 4= --Little; 5= --Very Little; 6=+Very Little; 7=+Little; 8=+Some; 9=+Much; 10=+Very Much. Note that 1-5 refer to negative growth; 6-10 refer to positive growth. The mean ranges from 2.4 to 3.5 because levels one to five (the negatives) were negatives on a five-point scale rather than a ten-point scale.

Item	1	2	3	4	5	6	7	8	9	10	n	Mean	SD
1. Intellectual development	0	0	0	0	0	2	9	39	28	10	88	3.3976	.8887
2. Spiritual development	0	1	1	1	1	0	2	23	46	16	91	3.5934	1.5127
3. Emotional development	2	1	5	1	0	4	3	31	36	5	88	2.7367	2.2385
4. Interpersonal skills develop.	0	0	1	0	0	0	5	44	33	6	89	3.3825	.9719
5. Marital relation. develop.	1	0	2	1	0	1	3	29	35	9	81	3.2859	1.6072
6. Relat. w/ children develop.	0	0	2	0	1	2	9	26	38	5	82	3.2863	1.2498
7. Communication skills dev.	0	0	0	1	1	2	6	30	33	14	87	3.4871	1.1727
8. Develop. of self-confidence	1	0	5	4	2	1	8	33	29	7	90	2.6337	2.1932
9. Independence/control	1	1	4	4	0	2	10	36	24	5	87	2.5514	2.1122
10. Political opinions dev.	0	0	1	0	1	18	13	20	13	4	70	2.4211	1.2726

<sup>65</sup>1="Very Little;" 2="Little;" 3="Some;" 4="Much;" 5="Very Much."

<sup>66</sup>Actual number of respondents on each variable.

<sup>67</sup>Questionnaire scale order has been adjusted as necessary to read from low end (i.e. "no" or "Unimportant" or "none" or "rarely" or "not important") to the high end (i.e. "yes" or "very important" "all the time," etc.). "Uncertain" has been retained as an answer and placed next up the scaling to "no."

<sup>68</sup>Actual number of respondents on each item.



Item and levels in scale	1	2	3	4	5	n <sup>69</sup>	Mean	SD
5. * <sup>70</sup> Concern for justice important (Q.9)	0	24	66	-	-	90	2.7333	.4422
6. “Purity” of thoughts, motives (Q.10)	0	2	89	-	-	91	2.9780	.1474
7. *Settling disputes & problems (Q.12 <sup>71</sup> )	0	58	32	-	-	90	2.3556	.4787
8. *Readiness to face persecution (Q.14)	1	88	3	-	-	91	2.0330	.1795
9. Import. of self-control (Q.16)	0	0	8	38	44	90	4.4000	.6464
10. Import of know. of Word of God (Q.18)	0	0	6	30	55	91	4.5385	.6202
11. Import. of perseverance in life (Q.20)	0	1	15	39	36	90	4.2088	.7530
12. Import. of love/kindness (Q.21)	0	0	2	32	57	91	4.6044	.5350
13. Importance of prayer (Q.22)	0	0	1	24	66	91	4.7143	.4781
14. Importance of spiritual gifts (Q.24)	0	4	10	32	45	91	4.2967	.8366
15. Importance of Spirit’s empowering (Q.26)	0	0	2	19	70	91	4.7473	.4852
16. Import. of walk in the Spirit (Q.28)	0	0	1	21	69	91	4.7473	.4617
17. Expression of “fruit of Spirit” (Q.30)	0	0	3	25	63	91	4.6593	.5420
18. Import. of daily confession of sin (Q.32)	1	1	3	30	56	91	4.5275	.7202
19. Import. of confession to others (Q.34)	1	12	19	36	23	91	3.7473	1.0176
20. Importance of devotional life (Q.36)	0	1	3	23	64	91	4.6484	.6032
21. Obedience given to authorities (Q.38)	5	75	6	2	-	89	2.0562	.4561
22. Import. of fellowship with others (Q.39)	0	3	8	43	37	91	4.2527	.7542
23. Importance of team ministry (Q.40)	3	4	14	45	25	91	3.9341	.9522
24. Importance of “weapons of warfare” (Q.41)	0	1	7	34	48	90	4.4333	.6840

Spiritual Dimensions: Real Values (Section 5)

Item and levels in scale	1	2	3	4	5 <sup>72</sup>	n <sup>73</sup>	Mean	SD
1. Dependence on God (Q.2)	0	5	75	13	-	90	3.0893	.4383
2. Burden for the lost (Q.4)	0	9	62	20	-	91	3.1209	.5545
3. Gentleness from confidence in God (Q.6)	0	23	50	18	-	91	2.9451	.6727
4. * <sup>74</sup> Perceived as godly person (Q.8)	0	25	66	-	-	91	2.7253	.4489
5. Quality of thoughts, motives, (Q.11)	1	13	74	3	0	91	2.8681	.4524

<sup>69</sup>Actual number of respondents on each item.

<sup>70</sup>Starred items refer to scoring order that has been altered to fit low to high end pattern. See footnote 67.

<sup>71</sup>There were only two “uncertain” responses in the sample so it was deleted as a level.

<sup>72</sup>Questionnaire scale order has been adjusted as necessary to read from low end (i.e. “no” or “Unimportant” or “none” or “rarely” or “not important”) to the high end (i.e. “yes” or “very important” “all the time,” etc.). “Uncertain” has been retained as an answer and placed next up the scaling to “no.”

<sup>73</sup>Actual number of respondents on each item.

<sup>74</sup>Starred items refer to scoring order that has been altered to fit low to high end pattern. See footnote 67.

Item and levels in scale	1	2	3	4	5	n	Mean	SD
6. Time spent in settling disputes (Q.13)	12	67	12	0	0	91	2.0000	.5164
7. *Willingness to face persecution (Q.15)	0	30	61	-	-	91	2.6703	.4727
8. Self-control (Q.17)	0	4	82	5	-	91	3.0110	.3160
9. On-going study of the Bible (Q.19)	1	13	54	21	-	91	3.0675	.6463
10. Amount of time spent in prayer (Q.23)	8	32	37	10	4	91	2.6703	.9435
11. *Gifts and ministry correlated (Q.25)	3	11	77	-	-	91	2.8132	.4693
12. *Ministry empowered by Holy Spirit (Q.27)	0	3	37	51	-	91	3.5275	.5645
13. *Daily life a walk in the Spirit (Q.29)	2	0	38	51	-	91	3.5165	.6212
14. *Life expressing fruit of the Spirit (Q. 31)	2	0	31	58	-	91	3.5934	.6142
15. *Daily confession of sin to God (Q.33)	1	0	24	65	-	91	3.7002	.5260
16. *Confession to others as needed (Q.35)	1	0	29	69	-	91	3.6484	.5452
17. *Communion with God/dev. life (Q.37)	3	0	24	63	-	91	3.6335	.6574
18. *Experience “power encounter” (Q.42)	13	28	47	-	-	91	2.3874	.7216

Language Speaking Proficiency (Brewster) Scale

Item	Response Frequency										n <sup>75</sup>	Mean	SD
	1	2	3	4	5	6	7	8	9 <sup>76</sup>				
1. Portuguese	0	6	4	7	18	22	8	14	12	91	6.0440	1.9715	
2. 2nd Lang. <sup>77</sup>	1	5	0	2	3	1	1	3	4	20	5.3500	2.8704	

Item and levels in scale	1	2	3	4 <sup>78</sup>	n <sup>79</sup>	Mean	SD
3. Clear language-learning goals <sup>80</sup> (Q. 3)	40	50	-	-	91	1.5559	.4969
4. Language learning progress (Q.4)	1	2	49	39	91	3.3846	.5920

<sup>75</sup>Actual number of respondents on each item.

<sup>76</sup>On the FSI of 0+ to 5 (see Chapter 4 for a description of this scale and the meaning of each level), the numbers above relate to the following scale levels (excluding 0+ since no one was at that level): 1=1; 2=1+; 3=2; 4=2+; 5=3; 6=3+; 7=4; 8=4+; 9=5.

<sup>77</sup>Some missionaries, notably New Tribes Mission, worked in languages other than Portuguese, mostly Indian tribal languages.

<sup>78</sup>Goals revised so that 1=“no” and 2=“yes.” The order of progress reversed so that 1=“retrogressing,” 2=“making no progress,” 3=“making some progress,” and 4=“making steady progress.”

<sup>79</sup>Actual number of respondents on each item.

<sup>80</sup>“Uncertain” was combined with “no” because to be uncertain means that there are no clear learning goals.



Self-Directed Language/Culture Learning

Item and levels in scale	1	2	3	4	n <sup>81</sup>	Mean	SD
1. Using ed. opportunities (S.1, P.3, Q.17)	8	16	46	17 <sup>82</sup>	91	2.8276	.8328
2. Taking time to learn (Sect.6, Pt.5, Q.16)	51	37 <sup>83</sup>	-	-	88	1.4201	.4881
3. Using mentors (Sect.6, Pt.5, Q.17)	50	39 <sup>84</sup>	-	-	89	1.4378	.4934
4. Visiting national homes (Sect.6, Pt.5, Q.15)	6	20	42	19	87	2.8178	.8379

Table 40: Item Statistics for Missionary-rated and National-rated Independent Variables

Missionary-rated: Personal Dimensions Statements (Question 1-13)

Item	1	2	3	4	5 <sup>85</sup>	n <sup>86</sup>	Mean	SD
1. Self-controlled	2	11	26	42	10	91	3.5165	.9233
2. 1st to act, suggest plan	10	25	22	27	7	91	2.9560	1.1539
3. Able to build relationships	0	12	18	39	22	91	3.7802	.9638
4. Flexible; open to alt. views	2	15	30	33	11	91	3.3956	.9762
5. Decision--cautious	0	4	25	42	20	91	3.8571	.8106
6. Self-confidence	5	11	19	39	17	91	3.5714	1.0969
7. Listens; perceives needs	0	10	26	45	9	90	3.5889	.8196
8. Shows interest in others	0	11	19	43	18	91	3.7473	.9140
9. Obstacles--keeps working	0	6	16	38	31	91	4.0330	.8876
10. Sensit. to socio-cult. context	0	6	26	40	19	91	3.7912	.8501
11. Frank rather than tactful	42	22	14	9	4	91	2.0220	1.1924
12. Comm. well with family	1	3	16	43	26	89	4.0112	.8460
13. Spir. growth; consis. disciple.	0	5	23	45	18	91	3.8352	.8064

National-rated: Personal Dimensions Statements (Part 2, questions 22-23)

Item	1	2	3	4	5 <sup>87</sup>	n <sup>88</sup>	Mean	SD
1. Happy in life and work	0	2	6	30	58	96	4.5000	.7108
2. Perceived as godly	0	1	3	25	68	97	4.6495	.5958

<sup>81</sup>Actual number of respondents on each variable.

<sup>82</sup>The order of questions is reversed so that 1=“uncertain,” 2=“taking little advantage,” 3=“taking some advantage,” and 4=“taking full advantage.”

<sup>83</sup>Order revised so that 1=“no” and 2=“yes.”

<sup>84</sup>Order revised so that 1=“no” and 2=“yes.”

<sup>85</sup>Order reversed so that lowest rating is at lowest number: 1=Hardly at All; 2=To Some Extent; 3=Quite a Bit; 4=A Great Deal; and 5=Completely.

<sup>86</sup>Actual number of respondents on each item.

<sup>87</sup>Order reversed so that lowest rating is at lowest number: 1=Hardly at All; 2=To Some Extent; 3=Quite a Bit; 4=A Great Deal; and 5=Completely.

<sup>88</sup>Actual number of respondents on each item.

Factor Analysis of Independent Variables

Factor analysis was done separately on *Personal Expectations*, *Personal Dimensions*, and *Spiritual Dimensions* because they are measuring different things. *Personal Growth*, *Ministry Skills Growth*, and *Language Learning Goals/Progress* were combined since all measure personal development variables. These three will be referred to as the *Personal Development Inventory*.

*Personal Dimensions: Self-rated*

Scoring of the Personal Dimensions is somewhat different from scoring the other dependent and independent variables because the structure of the questions means that the “positive” end can be either at the bottom end or the top end of the scale. Since “strongly agree” is always scored 5 and “strongly disagree” is always 1 some factor loadings are negative. Three variables related to spiritual characteristics were left out because initial factor analysis showed them to have no significant relationship to the other loaded variables and no significant relationship to each other. Factors were actually clearer without them. Since real spiritual values are factored as a set by themselves later, it was assumed that these could be left to that set. Variables under each factor which are *italicized* are included because they are significant to the factor even though they have a higher loading elsewhere.

Factor analysis was done with a 75% variance criterion using principal components as the extraction method. Average variable complexity is very rich at 3.448 (orthogonal solution) and 3.384 (oblique solution).<sup>89</sup> The total matrix sampling adequacy was .432 which is adequate for factor analysis (Bartlett’s Test of Sphericity<sup>90</sup> (DF:860); Chi Square=1815.7; p=.0001 level).<sup>91</sup> Because an oblique solution is being utilized, primary factor

<sup>89</sup>The following are the item by item orthogonal and oblique variable complexity scores.

Friendly	6.541	6.195	1stAct	4.239	3.942	AskQuest.	3.636	3.700
Analyze	1.340	1.259	PlansWork	2.219	2.011	PreferSamePeo.	1.266	1.214
NotPersist	2.075	1.850	PreferTalk	1.891	2.034	ShowInterest	3.923	4.013
IssuesClearCut	7.310	7.873	Cautious	6.136	5.473	Prudent	1.191	1.141
HardCope	1.841	1.715	Self-Control	1.570	1.425	RejectForeign	1.426	1.500
NotSilent	1.556	1.567	LackConf.	3.118	3.031	SayWhatThink	3.561	3.671
OthersInitiate	1.773	1.808	Trustworthy	10.40	9.684	ReadOthers	1.700	1.592
Frank	4.989	5.091	Compliment	1.476	1.330	NotHideFeel	1.229	1.173
ActQuickly	5.326	5.565	WorkW/Others	1.641	1.532	IdeasInterfere	10.95	11.170
Laws	1.176	1.147	CounselProb.	5.182	5.154	SenseFeelings	7.325	7.167
Don'tRespect	2.493	2.684	Conflict	4.869	5.146	CloseSpouse	4.176	4.073
Not1stPlan	2.052	1.948	Sensit.Polit.	1.630	1.373	GiveUp	4.790	4.173
AwareReal.	7.925	7.998	Comm.Diff.	1.357	1.361	FinishThings	1.107	1.106
Unders.Spouse	1.546	1.476	Conf.Judge.	1.442	1.378			

<sup>90</sup>A multivariate analog of the statistical test frequently applied to a single correlation coefficient to see if it is significantly different from 0.

<sup>91</sup>The usual level of acceptance is .50, so these variables are just acceptable as a homogeneous grouping.



intercorrelations were computed and showed that essentially all factors had been extracted, since all are under the .50 level.<sup>92</sup> See Table 41 for the results.

Table 41: Results of Factor Analysis on Independent Variables  
“Personal Dimensions”

Factor 1: (ID1) Positive Marital/Family Relationships

(Eigen Value: 5.156. Percent of Total Variance: 12.6%. Factor direction-positive)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Communication with my spouse is becoming more difficult (Q.41)	1.93	-.855
2. Generally, my spouse and I understand each other (Q.43)	4.21	.809
3. Compared to others, I am particularly close to my spouse and family (Q.35)	3.98	.574

Factor 2: (ID2) Tactfulness

(Eigen Value: 3.635. Percent of Total Variance: 8.9%. Factor direction-negative.<sup>93</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I prefer talking to listening (Q.8)	2.59	.792
2. Wrong beliefs--I say what I think rather than remaining silent (Q.17)	2.98	.758
3. Around others, I never hesitate to say what I think (Q.19)	2.31	.610
4. In decision making I tend to act quickly (Q.27)	2.81	.503
5. I prefer being frank over being tactful (Q.24)	2.53	.502

<sup>92</sup>Factor to factor intercorrelations for the 18 include the following:

	Fact. 1	Fact. 2	Fact. 3	Fact. 4	Fact. 5	Fact. 6	Fact. 7	Fact. 8	Fact. 9	Fact. 10	Fact. 11	Fact. 12	Fact. 13	Fact. 14	Fact. 15	Fact. 16	Fact. 17
Factor 1	1																
Factor 2	.101	1															
Factor 3	-.084	-.083	1														
Factor 4	.038	.055	-.064	1													
Factor 5	-.074	-.026	.059	-.024	1												
Factor 6	.145	.070	-.058	.079	-.074	1											
Factor 7	-.047	-.067	.040	-.092	.043	-.101	1										
Factor 8	-.074	-.084	.067	-.140	-.003	-.108	.085	1									
Factor 9	-.136	-.123	.086	-.095	.030	-.196	.102	.096	1								
Factor 10	.008	.005	-.005	.013	-.004	-.023	-.018	-.006	-.027	1							
Factor 11	-.108	-.058	.075	-.069	.107	-.145	.075	.094	.169	.012	1						
Factor 12	-.093	.024	.010	.113	.031	-.010	.011	-.072	.004	-.008	.019	1					
Factor 13	.080	.061	-.071	.115	-.088	.093	-.066	-.087	-.083	.03	-.091	.009	1				
Factor 14	.126	.056	-.069	.125	-.008	.136	-.072	-.109	-.113	.024	-.103	.021	.092	1			
Factor 15	-.100	-.043	.029	.007	.030	-.040	.065	.066	.043	-.004	-.026	.062	-.046	-.026	1		
Factor 16	-.014	.013	-.008	.054	-.031	.008	-.038	.023	.008	-.029	.056	.019	.033	.073	.004	1	
Factor 17	-.114	-.04	.082	-.098	.074	-.074	.063	.096	.088	-.024	.138	.002	-.109	-.051	.029	.022	1
Factor 18	.032	.01	-.016	.127	.044	.055	-.103	-.036	-.068	.036	-.022	.073	.061	.1	.002	.087	-.023

<sup>93</sup>Since the variable means are oriented to the negative end of the scale, this factor must be reversed to be interpreted as “tactfulness.” The questions were clearly geared toward “frankness.”

Factor 3: (ID3) Positive Interpersonal Attitudes/Interaction

(Eigen Value: 2.500. Percent of Total Variance: 6.1%. Factor direction-negative.<sup>94</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Many things about foreign countries I can't accept (Q.16) <sup>95</sup>	2.98	.816
2. There are a lot of people I don't respect very much (Q.33)	2.59	.691
3. For various reasons, I often find myself in conflict with others (Q.34)	2.08	.304
4. For the most part, I consider myself a friendly person (Q.1)	4.22	-.397 <sup>96</sup>
5. <i>I always make an effort to let others know I am interested in them (Q.10)</i>	3.65	-.321 <sup>97</sup>

Factor 4: (ID4) Analytical Perceptiveness/Curiosity

(Eigen Value: 2.239. Percent of Total Variance: 5.5%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. In decision-making, I take care to analyse all factors (Q.4)	3.83	.836
2. Different point of view--I become interested and ask questions (Q.3)	3.60	.588

Factor 5: (ID5) Probity/Respect for Laws and Customs

(Eigen Value: 1.976. Percent of Total Variance: 4.8%. Factor direction-negative.<sup>98</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. People in a foreign country should not have to live by its laws (Q.29)	1.61	.805

Factor 6: (ID6) Confidence in Personal Skills and Judgement

(Eigen Value: 1.907. Percent of Total Variance: 4.7%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Generally, I feel confident about my judgement (Q.44)	4.02	.851
2. My plans are almost certain to work (Q.5)	3.71	.707

Factor 7: (ID7) Self-Control and Confidence

(Eigen Value: 1.716. Percent of Total Variance: 4.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I remain in control of myself rather than react emotionally (Q.15)	3.50	-.726
2. I often lack confidence (Q.18)	2.71	.636

<sup>94</sup>Since the variable means are oriented to the negative end of the scale, this factor must be reversed to be interpreted as “positive interpersonal attitudes and interaction.”

<sup>95</sup>More people agreed with this than disagreed. This also indicates the this factor has a negative orientation if the title is to be retained positively.

<sup>96</sup>Variables 4 and 5 are negative because they are the reverse of the other three variables which are dominant.

<sup>97</sup>Italicized because this variable has a higher loading in ID14 but is still significantly high to affect the scoring of this factor as well.

<sup>98</sup>Negative because most disagreed with this. The reading then has to be reversed in order to fit the title given to it.



**Factor 8: (ID8) Risk-taking/Openness to People and Experiences**(Eigen Value: 1.593. Percent of Total Variance: 3.9%. Factor direction-negative.<sup>99</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I prefer being with people who see things as I do (Q.6)	3.58	.800
2. Decision--I prefer to go cautiously rather than take risks (Q.12)	3.69	.513
3. People often come to me with their problems (Q.31)	3.58	.435

**Factor 9: (ID9) Initiative**(Eigen Value: 1.386. Percent of Total Variance: 3.4%. Factor direction-negative.<sup>100</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Given a choice I prefer to let others take the initiative (Q.20)	3.13	.789
2. I am generally not one of the first to suggest a plan of action (Q.37)	3.03	.720
3. In a new situation, I am on of the 1st to act or make suggestions (Q.2)	3.17	-.555

**Factor 10: (ID10) Perseverance/Diligence**

(Eigen Value: 1.275. Percent of Total Variance: 3.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. When I start something, I like to finish it (Q.42)	3.77	.875

**Factor 11: (ID11) Persistence**(Eigen Value: 1.234. Percent of Total Variance: 3.0%. Factor direction-negative.<sup>101</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Hard task--I prefer to move on rather than persist (Q.7)	2.52	.693
2. I tend to give up with unduly complicated or tiring situations (Q.39)	2.05	.497

**Factor 12: (ID12) Emotional Self-control**(Eigen Value: 1.186. Percent of Total Variance: 2.9%. Factor direction-negative.<sup>102</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. If I feel frustrated, I find it hard to hide my feelings (Q.26)	3.43	.868

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<sup>99</sup>This factor has to be reversed to be interpreted as "risk-taking/openness to people and experiences." Where it is positive in regression and discriminant analysis, it means the opposite, that is, "not a risk-taker/lack of openness to people and experiences."

<sup>100</sup>This factor has to be reversed to be interpreted as "initiative." Where it is positive in regression and discriminant analysis, it means the opposite, that is, "lacking initiative." This is why the third variable has a negative loading.

<sup>101</sup>This factor has to be reversed to be interpreted as "persistence." Where it is positive in regression and discriminant analysis, it means the opposite, that is, "lacking persistence."

<sup>102</sup>This factor has to be reversed to be interpreted as "emotional and verbal self-control."

**Factor 13: (ID13) Prudence/Discretion**

(Eigen Value: 1.08. Percent of Total Variance: 2.6%. Factor direction-positive.)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. Because of political realities, it is better to be prudent (Q.13)	4.16	.870
2. Too many new ideas only interfere with what you already know (Q.30)	1.98	-.330

**Factor 14: (ID14) Interpersonal Interest**

(Eigen Value: 1.048. Percent of Total Variance: 2.6%. Factor direction-positive.)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. I always try to acknowledge and compliment others (Q.25)	3.81	.808
2. I always try to let others know that I am interested in them (Q.10)	3.64	.603

**Factor 15: (ID15) Copability/Flexibility**

(Eigen Value: .952. Percent of Total Variance: 2.3%. Factor direction-negative.<sup>103</sup>)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. I have found situations which I found hard to cope with (Q.14)	3.49	.748
2. Most important issues have clear-cut answers (Q.11)	2.61	.430

**Factor 16: (ID16) Sociability**

(Eigen Value: .941. Percent of Total Variance: 2.3%. Factor direction-positive.)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. I prefer working with others than alone (Q.28)	3.34	.772

**Factor 17: (ID17) Situational Sensitivity**

(Eigen Value: .903. Percent of Total Variance: 2.2 %. Factor direction-positive.)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. One need not be sensitive to local politics in a foreign country (Q.38)	2.01	.742
2. It is critical to be aware of local cultural realities (Q.40)	4.20	.365

**Factor 18: (ID18) Empathy**

(Eigen Value: .840. Percent of Total Variance: 2.0%. Factor direction-positive.)

<b>Variable and Instrument Item #</b>	<b>Var. Mean</b>	<b>Factor Loading</b>
1. Suffering/discomfort can be easily read on another's face (Q.23)	3.61	.760
2. I am usually able to sense the feelings of others quite accurately (Q.32)	3.70	.410

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<sup>103</sup>While the orientation of the second variable indicates flexibility, the strength of the first variable means that this factor has to be reversed to be interpreted as "copability/flexibility"



These eighteen factors account for 77.1% of the total variance of 41 Personal Dimensions Inventory (spiritual characteristics excluded). Six factors have to do with *interpersonal relationships* (totaling 34.5% of the variance): 1) Positive Marital/Family Relationships (Factor 1, 12.6%), 2) Tactfulness (Factor 2, 8.9%), 3) Positive Interpersonal Attitudes/Interaction (Factor 3, 6.1%), 4) Interpersonal Interest (Factor 14, 2.6%), 5) Sociability (Factor 16, 2.3%), and 6) Empathy (Factor 16, 2.0%).

The others have to do with *personal characteristics* (42.6% total): 1) Analytical Perceptiveness/Curiosity (Factor 4, 5.5%), 2) Probity/Respect for Laws and Customs (Factor 5, 4.8%), 3) Confidence in Personal Skills and Judgement (Factor 6, 4.7%), 4) Self-Confidence (Factor 7, 4.2%), 5) Risk-taking/Openness to People and Experiences (Factor 8, 3.9%), 6) Initiative (Factor 9, 3.4%), 7) Perseverance/Diligence (Factor 10, 3.1%), 8) Persistence (Factor 11, 3.0%), 8) Emotional Self-control (Factor 12, 2.9%), 9) Prudence/Discretion (Factor 13, 2.6%), 10) Copability/Flexibility (Factor 15, 2.3%), and 11) Situational Sensitivity (Factor 17, 2.2%). These eleven can be broken down in 6 areas: *confidence, initiative, perseverance, respect/discretion, self-control, and copability*.

Factor scales were developed and mean, median, standard deviation, range, and skew computed on each. See Table 42 for results. There is good symmetry on all factors except for positive skew on factor 5 (“probity/respect for laws and customs” at 1.1354) and negative skew on factors 6 (“confidence in personal skills and judgement” at -0.97690) and 14 (“interpersonal interest” at -0.82734).

**Table 42: Item Statistics for the Independent Factor Scores  
Self-Rated “Personal Dimensions” Scale**

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (ID1) Positive Marital/Family Relationships							
91	-0.00003	-0.05400	1.0432	5.1510	-2.8300	2.3210	-0.33351
Factor 2: (ID2) Tactfulness							
91	-0.00001	-0.03600	1.0193	5.0610	-2.8870	2.1740	-0.28636
Factor 3: (ID3) Positive Interpersonal Attitudes/Interaction							
91	-0.00012	-0.04500	1.0164	4.9410	-2.0280	2.9130	0.29545
Factor 4: (ID4) Analytical Perceptiveness/Curiosity							
91	-0.00001	0.20400	1.0407	5.7640	-3.0060	2.7580	-0.57067
Factor 5: (ID5) Probity/Respect for Laws and Customs							
91	0.00002	-0.12200	1.0175	5.8330	-1.9260	3.9070	1.1354
Factor 6: (ID6) Confidence in Personal Skills and Judgement							
91	0.00002	0.01800	1.0474	6.3630	-3.9010	2.4620	-0.97690

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 7: (ID7) Self-Control and Confidence							
91	0.00000	-0.30400	1.0234	4.6600	-1.8070	2.8530	0.68526
Factor 8: (ID8) Risk-taking/Openness to People and Experiences							
91	-0.00003	0.09300	1.0339	4.9540	-2.6740	2.2800	-0.37699
Factor 9: (ID9) Initiative							
91	0.00001	0.10000	1.0514	4.7850	-2.3820	2.4030	-0.15405
Factor 10: (ID10) Perseverance/Diligence							
91	-0.00008	0.14500	1.0032	4.6700	-2.5080	2.1620	-0.55967
Factor 11: (ID11) Persistence							
91	0.00004	0.00300	1.0452	5.5660	-2.9330	2.6330	0.03052
Factor 12: (ID12) Emotional Self-Control							
91	-0.00001	0.14900	1.0184	4.8470	-2.7580	2.0890	-0.50462
Factor 13: (ID13) Prudence/Discretion							
91	0.00003	-0.07100	1.0275	4.7830	-2.6100	2.1730	-0.01607
Factor 14: (ID14) Interpersonal Interest							
91	-0.00003	0.28800	1.0370	5.0890	-3.3540	1.7350	-0.82734
Factor 15: (ID15) Copability/Flexibility							
91	-0.00002	0.04700	1.0132	4.6620	-2.2840	2.3780	-0.12566
Factor 16: (ID16) Sociability							
91	0.00003	-0.01700	1.0123	5.8360	-2.3170	3.5190	0.34008
Factor 17: (ID17) Situational Sensitivity							
91	-0.00002	-0.17500	1.0288	5.8040	-2.4280	3.3760	0.52500
Factor 18: (ID18) Empathy							
91	0.00001	0.20500	1.0247	5.8700	-2.8840	2.9860	-0.18630

Personal Dimensions: Missionary-Colleague-Rated

Colleagues rated missionaries on representative items from the Personal Dimensions Inventory. The total matrix sampling adequacy was good at .783 (Bartlett’s Test of Sphericity, DF:90; Chi Square=480.132; p=.0001). Average variable complexity was fairly rich at 1.958 (orthogonal solution) and 1.796 (oblique solution).<sup>104</sup> An orthogonal factor analysis was performed resulting in 6 factors. See Table 43 for the results.

<sup>104</sup>The following are the item by item orthogonal and oblique variable complexity scores.

Control	2.958	2.723	1st to Act	1.193	1.168	BuildRelat.	1.505	1.108
Flexible	3.248	3.356	Cautious	1.147	1.032	Self-Confid.	1.318	1.094
Listener	1.378	1.100	ShowsInterest	1.346	1.283	CompletesW...	2.834	3.152
Sensitive	1.349	1.285	Frank	1.124	1.130	Comm.Family	1.325	1.146
Spir.Growth	3.622	2.835						



Table 43: Results of Factor Analysis on  
Missionary Colleague-Rated Personal Dimensions

Factor 1: (MID1) Interpersonal Skills

(Eigen Value: 4.711. Percent of Total Variance: 36.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Shows interest in others; compliments; demonstrates their value (Q.8)	3.75	.869
2. A good listener who accurately perceives others' needs and feelings (Q.7)	3.59	.801
3. Builds relationships; works well w/others; people come for help (Q.3)	3.78	.738
4. Responds flexibly to others; open/asks questions; not opinionated (Q.4)	3.40	.570

Factor 2: (MID2) Disciplined Confidence

(Eigen Value: 1.69. Percent of Total Variance: 13.0%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. One of the 1st to act, propose a plan, make suggestions (Q.2)	2.96	.869
2. Demonstrates self-confidence; capable of self-assertion (Q.6)	3.57	.861
3. Self-controlled in the face of obstacles (Q.1)	3.52	.527
4. Demonstrates consistent spiritual growth; disciplined discipleship (Q.13)	3.84	.468
5. Responds flexibly to others; open/asks questions; not opinionated (Q.4)	3.40	.243

Factor 3: (MID3) Deliberation/Cautiousness

(Eigen Value: 1.19. Percent of Total Variance: 9.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Decisions--all factors involved are cautiously weighed (Q.5)	3.86	.916

Factor 4: (MID4) Self-Controlled Tactfulness

(Eigen Value: 1.085. Percent of Total Variance: 8.3%. Factor direction-negative.<sup>105</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Frank and outspoken rather than tactful in dealings with others (Q.11)	2.02	.874
2. Self-controlled in the face of obstacles (Q.1)	3.52	.574

Factor 5: (MID5) Disciplined Personal Life Maintenance

(Eigen Value: .844. Percent of Total Variance: 6.5%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Relaxed communication with family (Family-relation maintenance) (Q.12)	4.01	.834
2. Completes work in spite of obstacles (self-discipline) (Q.9)	4.03	.586
3. Consistent spiritual growth/disciplined discipleship (spiritual-disc.) (Q.13)	3.84	.409

Factor 6: (MID6) Persistence with Contextual Sensitivity

(Eigen Value: .77. Percent of Total Variance: 5.9%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Sensitive to host country socio-cultural/political issues and realities (Q.10)	3.79	.860
2. Consistently works at a task until its completion (Q.9)	4.03	.627

<sup>105</sup>Reverse for interpretation in accordance with factor name.

These six factors arising from the missionary colleague-rated forms (representing 79.1% of the total variance) essentially verify those arising from the self-rated forms but more parsimoniously. Again, interpersonal skills achieved the greatest variance (36.2%) followed by disciplined self-confidence (13.0%). The next three factors identify some further personal characteristics: deliberation (9.2%), tactfulness (8.3%), and contextual sensitivity (5.9%). The only new factor is the fifth, identified as disciplined personal life maintenance (6.5%), that is, the disciplines necessary for a positively functional life. Means, median, standard deviation, range, and skew of the factor scales derived from these factors are shown in Table 44. These scales show good symmetry with low means and acceptable skew.

Table 44: Item Statistics for the Independent Factor Scores  
Missionary Colleague-Rated “Personal Dimensions”

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (MID1) Interpersonal Skills							
91	-0.00001	0.12900	1.0001	3.9950	-2.2710	1.7240	-0.46177
Factor 2: (MID2) Disciplined Confidence							
91	-0.00000	0.09800	1.0000	4.6240	-2.9080	1.7160	-0.57011
Factor 3: (MID3) Deliberation/Cautiousness							
91	0.00003	0.03100	1.0000	4.3930	-2.4000	1.9930	-0.02029
Factor 4: (MID4) Self-Controlled Tactfulness							
91	-0.00001	0.28300	1.0000	4.1160	-2.6020	1.5140	-0.69607
Factor 5: (MID5) Disciplined Personal Life Maintenance							
91	0.00000	0.16800	1.0000	4.4170	-2.6480	1.7690	-0.43547
Factor 6: (MID6) Persistence with Contextual Sensitivity							
91	-0.00005	0.04400	1.0000	5.3610	-3.2740	2.0870	-0.35238

Factor Analysis of Personal Development

This scale is made up (in this order) of 10 variables from Section 2, Part 1 “Personal Growth,” (question 1-10)<sup>106</sup>, 2 variables from Section 3 “Language Proficiency” (Questions

<sup>106</sup>Later regression analysis of dependent variables against Personal Development (Combined) Scale independent variables resulted in problems because of the extreme outliers in the “Personal Growth Scale.” This was because respondents were asked to scale themselves on a five-point Likert-type scale either positively or negatively. A small number identified negative development and this resulted in extreme outliers and considerable skew in the data. For example, all but one identified themselves as having developed intellectually from “very little” to “very much.” One however, identified negative development as “very much.” This results in one single outlier that affects the data considerably. See Table 39 where 1 to 5 identify negative development and 6 to 10 identify positive development. The two with the largest negative number are *emotional development* and *development of self-confidence* followed by *development of sense of independence and control*. To reduce the effect of these extreme outliers the “Personal Development Scale” was recoded. All negatives and positives identified as “very little” or “little” were coded as 1 (no growth) while all



3 and 4 which have to do with on-going progress of language learning), 5 variables from the “Personal Expectations Scale” (Section 6, Part 2, Q.8, 10, 11,12, and 13 having to do with satisfaction in adaptation and ministry), 1 variable from “General Education” (Section 1, Part 3, Question 17 having to do with the extent to which respondents are taking advantage of opportunities to development themselves and their ministries), and 2 variables from Section 6, Part 5, (questions 16 and 20 of “Social Dimensions” having to do with willingness to take time and use mentors for on-going culture learning). A further scale of 7 items on Ministry Growth is included, but because it is so dominant (coming out as one factor when analyzed with the other variables) factor analysis is done on it as a set alone. Total number of variables in this combined “Personal Development” scale are 20 plus 7 from the Ministry Growth set. This scale is assumed to be predictive of ministry competence, the premise being that continued personal development is necessary for continued ministry competence.

A criterion of 75% variance was used and final scores chosen from an oblique (varimax-orthotran rotation) solution. Average variable complexity is again fairly rich at 2.101 (orthogonal solution) and 2.017 (oblique solution).<sup>107</sup> The total matrix sampling adequacy is .637 indicating homogeneity of variables and suitability for factor analysis.<sup>108</sup> Bartlett’s Test of Sphericity<sup>109</sup> (DF:209) and a Chi Square value of 636.765 which is

positive items as “some,” “much,” and “very much” were recoded to 2 (growth). The result was more meaningful factors and significant improvement in regression analysis.

<sup>107</sup>The following are the item by item orthogonal and oblique variable complexity scores.

Intel.Dev.	1.313	1.220	Spir.Dev.	3.737	4.249	Emot.Dev.	6.321	5.978
Interpers.	1.174	1.221	Marital Dev.	1.480	1.451	Child.Relat.	1.407	1.394
Comm.Skill.	2.205	1.973	Self-Conf.	2.581	1.919	Independence	1.054	1.032
Polit.Opin.	1.043	1.021	Goals	1.072	1.049	Progress	2.964	2.674
HaveDoneWell	2.955	2.833	Child.Adapt....	1.168	1.088	SpouseAdapt...	1.224	1.100
SenseWellBe...	1.791	1.466	Pos.Expect....	1.235	1.157	Cont.Ed.	2.508	2.651
TimeLearn	1.166	1.177	Mentor	3.632	3.677			

<sup>108</sup>Only “political opinion” is significantly under the .50 level, possibly raising questions on the factor it forms.

Intel.Dev.R.	.605	Spir.Dev.R.	.704	Emot.Dev.R.	.642	Interpers.R.	.401
Marital Dev.R.	.434	Child.Relat.R.	.543	Comm.Skill.R.	.593	Self-Conf.R.	.755
Independ.R.	.656	Polit.Opin.R.	.442	Goals	.559	Progress	.785
HaveDoneWell	.771	Child.Adapt.S...	.619	SpouseAdapt...	.633	SenseWellBei...	.774
Pos.Expect.M....	.704	Cont.Ed.	.658	TimeLearn	.496	Mentor	.602

<sup>109</sup>A multivariate analog of the statistical test frequently applied to a single correlation coefficient to see if it is significantly different from 0.

significant at  $p=.0001$  are adequate. An oblique factor analysis was performed resulting in 9 factors.<sup>110</sup> See Table 45 for the results.

Table 45: Results of Factor Analysis  
on Self-Rated “Personal Development” Scale

Factor 1: (ID19) Family Adaptation to Schooling Situation

(Eigen Value: 4.205. Percent of Total Variance: 21%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. My children have adapted well to schooling situation (S.6, P.2, Q.10)	4.26	.902
2. Spouse and I adapted to children’s schooling situation (S.6, P.2, Q.11)	4.24	.892

Factor 2: (ID20) Development of Communication Skills

(Eigen Value: 2.477. Percent of Total Variance: 12.4%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Development of relationship with children (Section 2, Part 1, Q.6)	3.37	.839
2. Communication skills development (Section 2, Part 1, Q.7)	3.54	.709
3. Spiritual development (Section 2, Part 1, Q.2)	3.75	.448

Factor 3: (ID21) Development of Interpersonal Skills

(Eigen Value: 1.769. Percent of Total Variance: 8.8%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Interpersonal skills development (Section 2, Part 1, Q.4)	3.43	.896
2. Marital relationship development (Section 2, Part 1, Q.5)	3.47	.821

Factor 4: (ID22) Commitment to Learning

(Eigen Value: 1.50. Percent of Total Variance: 7.5%. Factor direction-negative.<sup>111</sup>)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Taking all the time needed for learning culture/language (Sect. 6, P.5, Q.16)	1.42	.872
2. Learning culture/language from a national mentor (Section 6, Part 5, Q. 17)	1.44	.511

<sup>110</sup>The following intercorrelations show that factors have been adequately extracted.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Factor 1	1							
Factor 2	-.003	1						
Factor 3	.067	.12	1					
Factor 4	-.147	.022	.035	1				
Factor 5	.057	.143	.022	-.052	1			
Factor 6	.170	-.077	.064	-.168	.029	1		
Factor 7	.315	.240	.135	-.153	.016	.15	1	
Factor 8	.109	.244	.148	-.070	.149	.015	.196	1
Factor 9	.026	.095	.077	-.090	.139	.078	-.012	.187

<sup>111</sup>Since most subjects scored negatively on these two variables, they must be reversed to be interpreted as “commitment to learning.”



Factor 5: (ID23) Commitment to Personal Intellectual Development

(Eigen Value: 1.297. Percent of Total Variance: 6.5%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Intellectual development (Section 2, Part 1, Q.1)	3.40	.812
2. Taking sufficient advantage of ed. opportunities (Sect.1,P.3,Q.17)	2.83	.703
3. <i>Learning culture/language from a national mentor (Section 6, Part 5, Q. 17)</i>	1.44	-.478 <sup>112</sup>

Factor 6: (ID24) Language Learning Development

(Eigen Value: 1.233. Percent of Total Variance: 6.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I have clear on-going language learning goals (Section 3, Q.3)	1.56	.886
2. Progress of language learning (Section 3, Q. 4)	3.38	.582
3. <i>Taking sufficient advantage of ed. opportunities (Sect.1,P.3,Q.17)</i>	2.82	.319

Factor 7: (ID25) Sense of Well-Being With Life and Work

(Eigen Value: 1.117. Percent of Total Variance: 5.6%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Positive expect. of the develop. and growth of ministry (S.6, P.2, Q.13)	4.09	.843
2. Satisf.--how family life, pers. dev., and ministry are fitting (S.6, P.2, Q.12)	4.04	.700
3. Satisfaction learning language, making friends, ministry (Sect.6,Pt.2, Q.8)	4.12	.517

Factor 8: (ID26) Development of Confidence

(Eigen Value: .953. Percent of Total Variance: 4.8%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Feelings of independence/control (Section 2, Part 1, Q.9)	2.98	.940
2. Self-confidence (Section 2, Part 1, Q.8)	3.10	.588

Factor 9: (ID27) Changes in Political Opinions

(Eigen Value: .913. Percent of Total Variance: 4.6%. Factor direction-negative.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Changes in political opinions	2.49	.914

Factorization of this Personal Development Scale has resulted in 9 categories with a total variance of 77.4% on 20 variables. Three factors relate to especially to the development of family inter-relationships: Factor 1, *Family Adaptation to Schooling Situation* (at 21.0% of the variance); Factor 2, *Communication Skills (Especially with One's Children*, 12.4%); and Factor 3, *Interpersonal Skills (Especially with Spouse*, 8.8%). The last two factors are

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<sup>112</sup>Italicized because this item is significant in terms of the factor score, but has a higher loading in another factor.

actually double-barrelled relating both to development of family relationships and to communication and interpersonal skills.

The next three factors are also related, but to continued learning on the field: Factor 4, *Orientation to Learning* referring to willingness to learn (7.5%); Factor 5, *intellectual development* (6.5%), and Factor 6, *language learning development* (6.2%). The last three factors have to do with relationship to life and work: Factor 7, *Satisfaction (Sense of Well-Being) With Life and Work* (5.6%); Factor 8, *Development of Confidence* (4.8%), and *Changes in Political Opinions* (4.6%).

The Ministry Skills Growth scale was factor analysed separately because it was so dominant that all variables appeared under one factor. An Orthogonal Matrix (with Orthotran/Varimax rotation) was used. Sample adequacy was good at .854 (with all items between .829 and .889; Bartlett Test of Sphericity=DF: 27; Chi Square=282.6; P=.0001) and variable complexity at 1.511 (orthogonal solution). For factors see Table 46.

**Table 46: Results of Factor Analysis  
Self-Rated "Ministry Skills Growth" Scale  
(Section 2; Part 2)**

**Factor 1: (ID28) Development of Knowledge, Skills, and Gifts**

(Eigen Value: 3.925. Percent of Total Variance: 56.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I have growing Biblical and theological knowledge for the task (Q.1)	3.41	.879
2. I am skilled in applying Bib. and theo. knowledge to ministry (Q.2)	3.08	.841
3. I am developing giftings and skills specific to the task (Q.3)	3.21	.752

**Factor 2: (ID29) Ability to Work Harmoniously with Others**

(Eigen Value: .868. Percent of Total Variance: 12.4%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I can work harmoniously with others like-gifted to finish task (Q.4)	3.42	.867
2. <i>I am able to formulate strategies in conjunction w/others (Q.7)</i>	2.92	.598 <sup>113</sup>

**Factor 3: (ID30) Capacity to Research and Strategize**

(Eigen Value: .689. Percent of Total Variance: 9.8%. Factor direction-negative.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. I know how to research the thinking and work of other missionaries (Q.6)	2.30	.813
2. I am able to assess my cultural, religious, and political context (Q.5)	2.76	.711
3. I am able to formulate credible and workable strategies w/others (Q.7)	2.92	.604

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<sup>113</sup>Italicised because, while this variable is not the highest loading in this factor, it is high enough to have significance in the factor score and it fits the factor clearly.



These three factors form 78.5% of the variance and are clearly distinct from each other. The highest factor (at 56.1% total variance) logically is *Development of Knowledge, Skills, and Gifts for Ministry* since this tends to be the primary focus in academic, pre-field, and on-field training. The second factor (*Ability to Work Harmoniously with Others*, 12.4%) is a critical one since inter-personal conflict is a leading problem on the field.<sup>114</sup> Finally, the factor with the least variance (9.8%) has to do with *Capacity to Research and Strategize*.

Scales of these factors as well as those from the Personal Ministry Development factors above have been developed in Table 47 for a total combined **Personal and Ministry Skills Development**. These scales show fairly good symmetry except for considerable negative skew on four factors which may indicate problem areas. Two have to do with family communication and relationships: factor 2, *Communication Skills (Especially with One’s Children)* at -1.2176 and factor 3: *Interpersonal Skills (Especially with Spouse)* at -2.6587. The other two have to do with *intellectual development* (factor 5) at -1.1545 and *satisfaction/sense of well-being with life and ministry* (factor 7) at -1.3465.

Table 47: Item Statistics for Self-Rated  
Personal and Ministry Skills Development Factors

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (ID19) Family Adaptation to Schooling Situation							
91	0.00007	-0.22600	1.0736	5.3520	-3.1420	2.2100	-0.15205
Factor 2: (ID20) Development of Communication Skills							
91	-0.00002	0.29500	1.0790	5.7540	-3.5010	2.2530	-1.2176
Factor 3: (ID21) Development of Interpersonal Skills							
91	0.00001	0.19200	1.0252	5.5410	-3.9640	1.5770	-2.6587
Factor 4: (ID22) Commitment to Learning							
91	0.00004	-0.15600	1.0356	4.7200	-2.4600	2.2600	0.11553
Factor 5: (ID23) Commitment to Personal Intellectual Development							
91	-0.00003	0.16500	1.0271	4.8950	-2.8930	2.0020	-1.1545
Factor 6: (ID24) Language Learning Development							
91	0.00000	0.05700	1.0405	5.0600	-2.3900	2.6700	-0.00695
Factor 7: (ID25) Sense of Well-Being With Life and Work							
91	-0.00001	0.02500	1.1212	7.9530	-5.2690	2.6840	-1.3465
Factor 8: (ID26) Development of Confidence							
91	-0.00001	0.27100	1.0726	4.5040	-2.3190	2.1850	-0.60907
Factor 9: (ID27) Changes in Political Opinions							
91	-0.00005	-0.36800	1.0357	4.4600	-2.0070	2.4530	0.17103

<sup>114</sup>For discussion on this see Chapter 1.

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 10: (ID28) Development of Knowledge, Skills, and Gifts							
91	0.00002	-0.32400	1.0000	3.8700	-1.7120	2.1580	0.42529
Factor 11: (ID29) Ability to Work Harmoniously with Others							
91	0.00002	-0.13100	1.0000	4.8370	-2.1970	2.6400	0.67108
Factor 12: (ID30) Capacity to Research and Strategize							
91	-0.00001	-0.15800	1.0000	5.9890	-2.8290	3.1600	0.25305

Spiritual Dimensions

The Spiritual Dimensions scale is two scales in one--a scale of “ideal” values held by missionaries and a scale of “real” values actually lived out in daily living. The means and standard deviations on the “ideal” scale showed high ideals (all but two were over 4.0) and significant homogeneity seen in the low standard deviation (see Table 39). The table of factors produced here (Table 48: “ideal values”) will not be used in comparison against criteria factors but is only for comparative reference to the “real” values (the factors we are interested in *vis a vis* ministry competence). An oblique solution was chosen as clearest<sup>115</sup> resulting in 10 factors containing 76.5% of total variance among the 24 variables.

Table 48: Results of Factor Analysis  
Self-Rated “Ideal” Spiritual Development Scale

Factor 1: Spirit-Controlled Life

(Eigen Value: 7.456. Percent of Total Variance: 31.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of deep knowledge of the Word of God (Q.18)	4.54	.915
2. Importance of “walking in the Spirit” & being “led by the Spirit” (Q.28)	4.75	.870
3. Importance of prayer in the dynamics of ministry (Q.22)	4.71	.818
4. Importance of the empowering of the Spirit of God (Q.26)	4.75	.817
5. Importance of daily communion with God in devotional life (Q.36)	4.65	.681
6. Importance of expressions of kindness and love in ministry (Q.21)	4.60	.679
7. Importance of self-control in all circumstances (Q.16)	4.40	.563
8. Importance of a life characterized by the “fruit of the Spirit” (Q.30)	4.66	.540
9. Importance of knowing and using “weapons of our warfare” (Q. 41)	4.43	.441
10. Importance of daily confession of sin to God (Q.32)	4.53	.405
11. Importance of “gifts of the Spirit” to ministry (Q.24)	4.30	.386

<sup>115</sup>Average variable complexity is high at 2.213 (oblique solution). The total matrix sampling adequacy is .83 indicating homogeneity of variables. Bartlett’s Test of Sphericity (DF:299) and a Chi Square value of 1249.301 significant at the .0001 level are very adequate.



Factor 2: Holiness of Life

(Eigen Value: 1.661. Percent of Total Variance: 6.9%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of purity in thought-life, motives, and actions (Q.10; 3 levels)	2.98	.763
2. Importance of deep desire for holiness in ministry (Q.7; 3 level question)	2.89	.623
3. <i>Importance of self-control in all circumstances (Q.16)</i>	4.40	.501
4. <i>Importance of being totally dependent on God (Q.1; 3 level question)</i>	2.96	.456

Factor 3: Team-ministry

(Eigen Value: 1.46. Percent of Total Variance: 6.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of ministering with others in a team (Q.40)	3.93	.917
2. Importance of fellowship with other believers (Q.39)	4.25	.616

Factor 4: Dependence on God

(Eigen Value: 1.37. Percent of Total Variance: 5.7%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of confidence in the sovereign work and timing of God (Q.5; 3 levels)	2.92	.775
2. <i>Importance of kindness and love in ministry (Q.21)</i>	4.60	.518
3. Importance of total dependence on God (Q.1; 3 level question)	2.96	.497

Factor 5: Commitment

(Eigen Value: 1.336. Percent of Total Variance: 5.6%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Should a missionary be willing to face persecution w/ nat. believers (Q.14)	4.30	.903

Factor 6: Peace-Making/Mediation

(Eigen Value: 1.139. Percent of Total Variance: 4.7 %. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Should missionary be involved in settling disputes/problems (Q.12; 3 levels)	2.36	.927

Factor 7: Qualified Obedience to Authority

(Eigen Value: 1.099. Percent of Total Variance: 4.6 %. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of obedience being shown to those in authority (Q.38)	2.06	-.843

Factor 8: Concern for Needs/Justice

(Eigen Value: .996. Percent of Total Variance: 4.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of concern for needs seen and injustices encountered (Q.9; 3 levels)	2.73	.929

Factor 9: Burden and Concern for People

(Eigen Value: .966. Percent of Total Variance: 4 %. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of having a burden for the “lost” (Q.3; 3 level question)	2.92	.781

Factor 10: Perseverance

(Eigen Value: .854. Percent of Total Variance: 3.6 %. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Importance of a persevering approach to all areas of life (Q.20)	4.21	.882

Interestingly, and not surprisingly, the “real” spiritual factors are fairly parallel to the ideal though somewhat more muted. Orthogonal solution rotated varimax factor analysis resulted in 10 factors with 76.9% of variation among the 21 variables.<sup>116</sup> Total matrix sampling is at an acceptable adequacy of .773 (Bartlett Test of Sphericity-DF 230; the Chi Square test is 595.647; P: .0001).<sup>117</sup> Variable complexity is high at 2.401 orthogonal solution and 2.236 oblique solution.<sup>118</sup> Intercorrelations of variables are below .50 indicating that factors have been acceptably extracted.

Table 49: Results of Factor Analysis  
Self-Rated “Real” Spiritual Development Scale

Factor 1: (ID31) Right Relationships/Concern for People

(Eigen Value: 5.296. Percent of Total Variance: 25.2%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Making sure there is no fault between self and other believers (S.5,Q.35)	3.65	1.039
2. Depth of personal burden for the “lost” (S.5,Q. 4)	3.12	.720
3. Ministry empowered by the Holy Spirit (S.5,Q.27)	3.53	.585
4. Willingness to face persecution with national believers (S.5,Q.15)	2.67	.417

<sup>116</sup>These 21 variables include 3 from the Personal Dimensions Scale (Section 6, Part 4, questions 9, 21, and 36) and the 18 “real” spiritual values questions from Section 5, questions 2, 4, 6, 8, 11, 13, 15, 17, 19, 23, 25, 27, 29, 31, 33, 35, 37, and 42.

<sup>117</sup>The measures of variable sampling adequacy for each item shows that all are acceptably above the .50 level:

Prayer	.702	Spir.LifeImp.	.366	AskHolySpirit	.778	Dep.God	.722	Burden	.808
Confid.	.738	Holiness	.754	Purity	.837	Disputes	.477	Persec.	.779
SelfContr.	.751	KnowWord	.800	Prayer	.688	Gifts	.563	Power	.868
Sp.Walk	.886	Sp.Fruit	.789	Conf.Sin	.730	Conf.Fault	.733	Devotion	.850
Spir.War.	.729								

<sup>118</sup>The following are the item by item orthogonal and oblique variable complexity scores.

Prayer	3.380	4.132	Spir.LifeImp...	1.125	1.091	AskHolySpirit	1.222	1.119
Dep.God	2.111	1.797	Burden	4.783	4.212	Confid.	1.431	1.449
Holiness	1.388	1.198	Purity	1.832	1.410	Disputes	1.144	1.091
Persec.	5.122	6.076	SelfContr.	3.685	3.920	KnowWord	4.049	3.523
Prayer	1.208	1.318	Gifts	1.136	1.192	Power	3.763	2.246
Sp.Walk	2.486	1.533	Sp.Fruit	4.215	3.801	Conf.Sin	2.065	2.138
Conf.Fault	1.127	1.137	Devotion	1.883	1.509	Spir.War.	1.259	1.058



Factor 2: (ID32) Mediation/Peace-Makers

(Eigen Value: 1.699. Percent of Total Variance: 8.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Time involved in mediating disputes (S.5,Q.13)	2.00	.911

Factor 3: (ID33) Spirit-Controlled Holy Life

(Eigen Value: 1.555. Percent of Total Variance: 7.4%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Daily confession of sin to God as part of life and ministry (S.5,Q.33)	3.70	.977
2. Maintenance of daily devotional life (communion with God) (S.5,Q.37)	3.63	.833
3. Quality of purity of thought-life, motives, and actions (S.5,Q.11)	2.81	.776
4. Extent of personal self-control (S.5, Q.17)	3.63	.663
5. Daily life characterized by a "walk in the Spirit" (S.5,Q.29)	3.52	.626
6. Daily life characterized by the "fruit of the Spirit" (S.5,Q.31)	3.59	.505

Factor 4: (ID34) Dependence on God

(Eigen Value: 1.336. Percent of Total Variance: 6.4%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Confidence in God's sovereign working in the lives of others (S.5,Q.6)	2.95	.944
2. Dependence on God (S.5,Q. 2)	3.09	.832

Factor 5: (ID35) Prayer-Life

(Eigen Value: 1.298. Percent of Total Variance: 6.2%. Factor direction-negative.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Time spent in average in daily life (S.5,Q.23)	2.67	1.018
2. I spend adequate time in prayer (S.6, P.4, Q.9)	2.38	.550

Factor 6: (ID36) Maintenance of Spiritual Life

(Eigen Value: 1.205. Percent of Total Variance: 5.7%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Quality of spiritual life more important than quality of work (S.6, P.4, Q.21)	3.67	.882

Factor 7: (ID37) Dealing with Spiritual Realities<sup>119</sup>

(Eigen Value: 1.067. Percent of Total Variance: 5.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Experience of spiritual "power encounter" (S.5,Q.42) <sup>120</sup>	2.39	.868

<sup>119</sup>c.f. Ephesians 6:10-20. Factor direction positive because based on a three-point Likert.<sup>120</sup>A few respondents indicated that they did not understand the meaning of this term and consequently checked "uncertain." However, based on the responses to the preceding question on the "importance of and use of the 'weapons of our warfare,'" all but one answered, the majority in the affirmative (means: 4.43 with standard deviation of only .68).

Factor 8: (ID38) Spiritual Gifting for Ministry

(Eigen Value: 1.04. Percent of Total Variance: 5.0%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Ministry and “spiritual gifting” correlated (S.5,Q.25)	2.81	.960
2. On-going study of the Word of God (S.5,Q.19)	3.07	.494

Factor 9: (ID39) Dependence on the Holy Spirit

(Eigen Value: .857. Percent of Total Variance: 4.1%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Problem or new task, I ask the Holy Spirit to guide me (S.6, P.4, Q.36)	3.85	1.032

Factor 10: (ID40) Godliness of Life Before People

(Eigen Value: .774. Percent of Total Variance: 3.7%. Factor direction-positive.)

Variable and Instrument Item #	Var. Mean	Factor Loading
1. Perceived as a “godly” person by the community (S.5,Q.8)	2.73	.846

These 10 factors fit five distinct dimensions. These include 1) Interpersonal Relationships: factor 1, *Right Relationships/Concern for People* (25.2%) and factor 2, *Mediation/Peace-Makers* (8.1%); 2) Holiness of Life: factor 3, *Spirit-Controlled Holy Life* (7.4%) and factor 10, *Holiness of Life Before People* (3.7%); 3) Dependence on God: factor 4, *Dependence on God* (6.4%) and factor 9, *Dependence on the Holy Spirit* (3.7%); 4) Prayer-Life: factor 5, *Prayer-Life* (6.2%) and factor 7, *Dealing with Spiritual Realities*” (5.1%); and 5) Spiritual Life Dynamics: factor 3, *Spirit-Controlled Holy Life* (7.4%), factor 6, *Maintenance of Spiritual Life* (5.7%), and factor 8, *Spiritual Gifting for Ministry* (5.0%).

Table 50 gives means, median, standard deviations, range, and skewness on the scales developed from “real” spiritual values factor scores. It can be observed that the distribution of these scales is relatively symmetrical. The least symmetrical (negative skew) is factor 8, *Spiritual Gifting for Ministry*. The most symmetrical scales are factor 2 “*mediation/peace-makers*” and factor 6 “*maintenance of spiritual life.*”

Table 50: Item Statistics for Self-Rated “Real” Spiritual Dimensions Factors

n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 1: (ID31) Right Relationships/Concern for People							
91	-0.00002	0.18700	1.3741	6.9260	-4.5000	2.4260	-0.71953



n	Mean	Median	SD	Range	MinRange	MaxRange	Skew
Factor 2: (ID32) Mediation/Peace-Makers							
91	0.00003	-0.03900	1.0540	5.0850	-2.6410	2.4440	0.02129
Factor 3: (ID33) Spirit-Controlled Holy Life							
91	0.00002	0.23600	1.4385	8.2610	-4.6330	3.6280	-0.82939
Factor 4: (ID34) Dependence on God							
91	0.00000	-0.23200	1.2918	6.3950	-2.5820	3.8130	0.47737
Factor 5: (ID35) Prayer-Life							
91	0.00000	-0.14000	1.2017	6.8530	-2.7910	4.0620	0.52494
Factor 6: (ID36) Maintenance of Spiritual Life							
91	-0.00002	0.05200	1.0288	5.6120	-2.5720	3.0400	-0.15985
Factor 7: (ID37) Dealing with Spiritual Realities							
91	-0.00004	0.03000	1.1235	5.7000	-2.8390	2.8610	-0.23948
Factor 8: (ID38) Spiritual Gifting for Ministry							
91	-0.00002	0.27800	1.1169	6.2550	-4.4860	1.7690	-1.6866
Factor 9: (ID39) Dependence on the Holy Spirit							
91	0.00002	0.05800	1.2781	6.6410	-3.9740	2.6670	-0.68415
Factor 10: (ID40) Godliness of Life Before People							
91	0.00002	0.18200	1.1506	5.0110	-2.6760	2.3350	-0.36159

Moderator Variables

The moderator variables (Section 7) are a series of problem areas that missionary subjects face in their cross-cultural life and ministry related to living conditions, understanding the culture, culture-learning approaches, interpersonal relationships, intercultural contact, work habits, ministry issues, and personal emotional issues. Subjects were asked to rate the intensity of the problem during their first year overseas, the following 2-3 years, and currently (4 to 25+ years) on a 1 to 5 scale (rarely, sometimes, often, frequently, and always). For each of these three periods of time Table 51 identifies the number and percentage that responded per category as well as the total number of responses, period means, and period standard deviation. It should be noted that “currently” always has fewer numbers responding because there are subjects in their first three years whose “current year” corresponds to one of the other two categories. The total numbers also dropped in some of the series since a number marked either “Not Applicable” or did not answer at all, either not knowing how to answer or not willing to.<sup>121</sup>

<sup>121</sup>One of the problems with this instrument was that it was included at the end of a very long questionnaire, which took most subjects nearly four hours to complete. By this time, most were tired and since some had been on the field for so many years (25+) they found it difficult to remember that

Table 51: Item Statistics on Moderator Variables (Section 7)

Series One: Problems with Living Conditions

1. Climate

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	24	30.0	29	36.2	16	20.0	11	13.8			80	2.18	1.02
2-3 years	28	36.8	34	44.7	12	15.8	2	2.6			76	1.84	.78
Currently	27	41.5	30	46.2	5	7.7	3	4.6			65	1.75	.79

2. Housing

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	38	46.9	28	34.6	8	9.9	7	8.6			81	1.80	.94
2-3 years	42	54.5	21	27.3	10	13.0	4	5.2			77	1.69	.89
Currently	52	82.5	7	11.1	1	1.6	1	1.6	2	3.2	63	1.32	.86

3. Personal Security

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	44.7	17	22.4	15	19.7	10	13.2			76	2.01	1.09
2-3 years	36	47.4	26	34.2	12	15.8	2	2.6			76	1.74	.82
Currently	36	52.9	19	27.9	7	10.3	6	8.8			68	1.75	.97

4. Availability of Goods and Services

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	23	28.0	29	35.4	8	9.8	16	19.5	6	7.3	82	2.43	1.29
2-3 years	26	32.1	28	34.6	15	18.5	8	9.9	4	4.9	81	2.21	1.15
Currently	42	60.0	24	34.3	1	1.4	3	4.3			70	1.50	.74

5. Use and Enjoyment of Local Foods

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	36	46.2	25	32.1	10	12.8	6	7.7	1	1.3	78	1.86	1.00
2-3 years	43	58.1	22	29.7	4	5.4	5	6.8			74	1.61	.87
Currently	50	83.3	10	16.7							60	1.17	.38

6. Health

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	30	39.5	26	34.2	10	13.2	10	13.2			76	2.0	1.03
2-3 years	32	43.8	25	34.2	11	15.1	5	6.9			73	1.85	.92
Currently	32	47.1	25	36.8	10	14.7	1	1.5			68	1.71	.77

7. Caring for Personal Effects

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	30	37.5	30	37.5	12	15.0	8	10.0			80	1.98	.97
2-3 years	33	42.3	30	38.5	9	11.5	5	6.4	1	1.3	78	1.86	.95
Currently	46	71.9	16	25.0	2	3.1					64	1.31	.53

far back. However, this scale does seem to show viable patterns and is consistent with what the other instruments have revealed.



8. Need for Recreation/Sports Facilities

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	45.3	24	32.0	10	13.3	3	4.0	4	5.3	75	1.92	1.11
2-3 years	32	45.1	20	28.2	13	18.3	4	5.6	2	2.8	71	1.93	1.06
Currently	31	50.8	21	34.4	4	6.6	4	6.6	1	1.6	61	1.74	.96

9. Adequate Finances

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	41	53.2	20	26.0	10	13.0	4	5.2	2	2.6	77	1.78	1.03
2-3 years	38	53.5	14	19.7	10	14.1	8	11.3	1	1.4	71	1.87	1.12
Currently	42	67.7	14	22.6	4	6.5	2	3.2			62	1.45	.76

10. Sleeping Patterns

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	50	74.6	12	17.9	1	1.5	4	6.0			67	1.39	.80
2-3 years	47	75.8	11	17.7	2	3.2	2	3.2			62	1.34	.70
Currently	39	68.4	14	24.6	2	3.5	2	3.5			57	1.42	.73

11. Water Quality, Availability, Volume

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	30	42.9	20	28.6	12	17.1	5	7.1	3	4.3	70	2.01	1.14
2-3 years	29	41.4	21	30.0	11	15.7	8	11.4	1	1.4	70	2.01	1.08
Currently	41	70.7	16	27.6			1	1.7			58	1.33	.57

12. Need for Privacy

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	36	47.4	32	42.1	5	6.6	3	4.0			76	1.67	.77
2-3 years	30	40.5	25	33.8	10	13.5	9	12.2			74	1.97	1.02
Currently	31	50.8	21	39.3	4	6.6	1	1.6	1	1.6	61	1.64	.82

There is clear acclimatization and acculturation over a period of time on all but four of these items. Since there are more older missionaries in the “current” bracket, some problems such as climate, housing (for a few), need for privacy, and sleeping pattern are higher than for those in their second to third year. Concern for personal security is highest for first year, drops in the next two years, and rises again for those beyond their fourth year. Otherwise, the problem intensity pattern consistently drops from the first year.

On the basis of the means (μ), the highest problems experienced by those in their first year are 1) lack of availability of good and services that they were used to, 2) climate, and 3) health. The highest problems experienced by those in their second and third years are 1) lack of availability of good and services, 2) water quality and availability, 3) need for privacy, and 4) need for recreation and sports facilities. The highest problems experienced by those past their fourth year (currently) are 1) personal security, 2) climate, 3) need for recreation and sports facilities, and 4) health.

Series Two: Problems with Cognitive Understanding of the Culture

13. How Nats. Interact with Each Other

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	9	10.5	18	20.9	28	32.6	23	26.7	8	9.3	86	3.03	1.13
2-3 years	16	18.8	39	45.9	18	21.2	12	14.1			85	2.31	.94
Currently	32	44.4	36	50.0	4	5.6					72	1.61	.59

14. How Nationals Act with Me

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	10	11.8	27	31.8	21	24.7	22	25.9	5	5.9	85	2.82	1.13
2-3 years	19	22.6	40	47.6	16	19.0	9	10.7			84	2.18	.91
Currently	42	57.5	28	38.4	3	4.1					73	1.47	.58

15. The Way Nationals Think

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	6	6.9	19	21.8	23	26.4	28	32.2	11	12.6	87	3.22	1.14
2-3 years	13	15.3	32	37.6	26	30.6	14	16.5			85	2.48	.95
Currently	16	35.1	33	44.6	12	16.2	3	4.1			74	1.89	.82

16. Cultural Worldview and Philosophy

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	10.0	21	26.2	19	23.8	22	27.5	10	12.5	80	3.06	1.21
2-3 years	16	20.0	29	36.2	21	26.2	12	15.0	2	2.5	80	2.44	1.05
Currently	29	42.0	32	46.4	4	5.8	3	4.4	1	1.5	69	1.77	.86

17. Cultural Customs and Manners

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	9.8	18	22.0	22	26.8	23	28.0	11	13.4	82	3.13	1.19
2-3 years	16	19.3	36	43.4	19	22.9	12	14.5			83	2.33	.95
Currently	36	52.9	26	38.2	5	7.4	1	1.5			68	1.57	.70

18. Cultural Values and Ideals

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	7	8.2	23	27.1	24	28.2	21	24.7	10	11.8	85	3.05	1.15
2-3 years	15	17.9	38	45.2	22	26.2	8	9.5	1	1.2	84	2.31	.92
Currently	34	48.6	31	44.3	3	4.3	2	2.9			70	1.61	.71

19. Communication Patterns and Channels

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	14	17.5	16	20.0	15	18.8	30	37.5	5	6.3	80	2.95	1.24
2-3 years	18	23.4	31	40.3	20	26.0	8	10.4			77	2.23	.93
Currently	40	60.6	22	33.3	3	4.6	1	1.5			66	1.47	.66



**20. Acceptable Dress for Various Situations**

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	22	28.6	28	36.4	12	15.6	13	16.9	2	2.6	77	2.29	1.13
2-3 years	40	51.9	27	35.1	6	7.8	4	5.2			77	1.66	.84
Currently	49	75.4	15	23.1	1	1.5					65	1.26	.48

**21. How to Give & Receive Gifts**

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	17	21.5	25	31.6	21	26.6	14	17.7	2	2.5	79	2.48	1.10
2-3 years	31	40.3	34	44.2	11	14.3	1	1.3			77	1.78	.79
Currently	45	67.2	19	28.4	3	4.5					67	1.37	.57

**22. Local Politics**

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	11	13.3	15	18.1	18	21.7	24	28.9	15	18.1	83	3.20	1.30
2-3 years	16	19.5	24	29.3	27	32.9	10	12.2	5	6.1	82	2.56	1.12
Currently	27	38.0	28	39.4	10	14.1	3	4.2	3	4.2	71	1.97	1.04

**23. National Public Social Functions**

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	15	18.5	14	17.3	20	24.7	24	29.6	8	9.9	81	2.95	1.27
2-3 years	22	27.5	23	28.8	25	31.2	9	11.2	1	1.3	80	2.30	1.04
Currently	36	53.7	21	31.3	8	11.9	2	3.0			67	1.64	.81

**24. Non-Verbal Communication Behaviour**

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	12	14.3	19	22.6	12	14.3	28	33.3	13	15.5	84	3.13	1.32
2-3 years	17	20.7	25	30.5	25	30.5	15	18.3			82	2.46	1.02
Currently	34	48.6	28	40.0	7	10.0	1	1.4			70	1.64	.72

Problems with cognitive understanding of the culture drop dramatically and consistently over time. Even the difference between first year and second-third year groups is considerable. Language and culture learning programs as well as involvement in culture appear to make the difference. Cognitive acculturation is clearly taking place as seen in the drop in the means and standard deviations from first year to current.

In their first year, subjects identified the following (in order based on the means,  $\mu$  cut-off at 3.0) as their leading problem areas: 1) the way nationals think, 2) local politics, 3) non-verbal communication behaviour, 4) cultural customs and manners, 5) cultural worldview and philosophy, 6) cultural values and ideals, and 7) how nationals interact with each other. Second and third year subjects identified the following (in order based on the means,  $\mu$  cut-off at 2.30) as their leading problem areas: 1) local politics, 2) the way nationals think, 3) non-verbal communication behaviour, 4) cultural worldview and philosophy, 5) cultural customs and manners, 6) cultural values and ideals, 7) how nationals interact with

each other, and 8) understanding national public social functions. While the means and standard deviations drops considerably for those beyond their fourth year, the areas are essentially the same for them as for the second and third year subjects ( $\mu$  cut-off at 1.60):

- 1) local politics, 2) the way nationals think, 3) cultural worldview and philosophy,
- 4) understanding national public social functions, 5) non-verbal communication behaviour,
- 6) cultural values and ideals, and 7) how nationals interact with each other.

Series 3: Problems with Culture Learning Approaches

25. Finding a National Mentor

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	18	24.0	26	34.7	9	12.0	15	20.0	7	9.3	75	2.56	1.31
2-3 years	24	31.2	21	27.3	22	28.6	10	13.0			77	2.23	1.04
Currently	40	64.5	16	25.8	3	4.8	3	4.8			62	1.50	.80

26. Organizing and Analyzing Cultural Facts

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	11.0	22	30.1	18	24.7	16	21.9	9	12.3	73	2.95	1.21
2-3 years	14	19.2	28	38.4	20	27.4	11	15.1			73	2.38	.97
Currently	24	39.3	28	45.9	6	9.8	3	4.9			61	1.80	.81

27. Understanding Cultural Patterns Explaining Behaviour

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	6	7.6	22	27.8	19	24.1	22	27.8	10	12.7	79	3.10	1.17
2-3 years	13	16.2	31	38.8	22	27.5	13	16.2	1	1.3	80	2.48	.99
Currently	30	46.2	28	43.1	5	7.7	2	3.1			65	1.68	.75

28. Learning to Understand Behavioural Motivations

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	9.8	18	22.0	19	23.2	27	32.9	10	12.2	82	3.16	1.19
2-3 years	14	16.7	31	36.9	30	35.7	8	9.5	1	1.2	84	2.42	.92
Currently	24	34.3	38	54.3	7	10.0	1	1.4			70	1.79	.68

29. Cultural Aesthetics

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	20	24.1	20	24.1	22	26.5	14	16.9	7	8.4	83	2.61	1.26
2-3 years	27	32.9	28	34.1	15	18.3	9	11.0	3	3.7	82	2.18	1.12
Currently	29	43.3	26	38.8	6	9.0	6	9.0			67	1.84	.93

30. Internalizing Cultural Values

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	10.7	20	26.7	14	18.7	24	32.0	9	12.0	75	3.08	1.23
2-3 years	13	16.9	24	31.2	23	29.9	16	20.8	1	1.3	77	2.58	1.04
Currently	22	33.8	31	47.7	6	9.2	6	9.2			65	1.94	.90



31. Anticipating Behaviours

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	11	14.9	16	21.6	14	18.9	20	27.0	13	17.6	74	3.11	1.34
2-3 years	18	24.7	19	26.0	22	30.1	12	16.4	2	2.7	73	2.47	1.12
Currently	25	39.7	29	46.0	7	11.1	2	3.2			63	1.78	.77

32. Initiating Relationships

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	8	9.4	27	31.8	18	21.2	25	29.4	7	8.2	85	2.95	1.15
2-3 years	20	23.8	37	44.0	22	26.2	5	5.6			84	2.14	.85
Currently	40	56.3	28	39.4	2	2.8	1	1.14			71	1.49	.63

33. Initiating Social Behaviour

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	12	15.0	19	23.8	20	25.0	20	25.0	9	11.2	80	2.94	1.25
2-3 years	17	21.5	28	35.4	29	36.7	5	6.3			79	2.28	.88
Currently	35	53.8	25	38.5	4	6.15	1	1.54			65	1.55	.69

34. Involvement in Social Functions

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	12	14.3	21	25.0	15	17.9	21	25.0	15	17.9	84	3.07	1.34
2-3 years	18	22.0	25	30.5	23	28.0	9	11.0	7	8.5	82	2.54	1.20
Currently	30	43.5	23	33.3	11	15.9	2	2.9	3	4.4	69	1.91	1.05

35. Understanding Functional Values of Social and Cultural Activities

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	10	12.0	22	26.5	15	18.1	23	27.7	13	15.7	83	3.08	1.29
2-3 years	16	19.0	27	32.1	25	29.8	13	15.5	3	3.6	84	2.53	1.08
Currently	27	38.6	31	44.3	7	10.0	3	4.3	2	2.9	70	1.89	.96

Again there is dramatic evidence in this series of cognitive, affective, and behavioural acculturation over time (seen in the shrinking means and standard deviation) that subjects move toward less problem intensity in each of these issues. In their first year, subjects identified the following (in order based on the means,  $\mu$  cut-off at 3.0) as their leading problem areas: 1) learning to understand behavioural motivations, 2) anticipating behaviours, 3) understanding cultural patterns explaining behaviour, 4) understanding functional values of social and cultural activities, 5) internalizing cultural values, and 6) involvement in social functions. Interestingly, second to third year subjects and subjects beyond their fourth year continued to have problems in these same areas.

Second to third year subjects identified the following in their order based on the means ( $\mu$  cut-off at 2.40): 1) internalizing cultural values, 2) involvement in social functions, 3) understanding functional values of social and cultural activities, 4) understanding cultural patterns explaining behaviour, 5) anticipating behaviours, and 6) learning to understand

behavioural motivations. Fourth year + subjects identified the following<sup>122</sup> in almost exactly the same order as second-third year subjects: 1) internalizing cultural values, 2) involvement in social functions, 3) understanding functional values of social and cultural activities, 4) accepting cultural aesthetics, 5) organizing and analyzing cultural facts, 6) learning to understand behavioural motivations, and 7) anticipating behaviours.

Series 4: Problems with Interpersonal Relationships

36. Lack Contact with Missionaries

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	44	56.4	18	23.1	9	11.5	6	7.7	1	1.3	78	1.74	1.02
2-3 years	36	46.8	25	32.5	7	9.1	8	10.4	1	1.3	77	1.87	1.04
Currently	45	69.2	12	18.5	4	6.2	4	6.2			65	1.19	.87

37. Too Much Contact with Missionaries

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	52	74.3	12	17.1	2	2.9	4	5.7			70	1.40	.81
2-3 years	50	70.4	18	25.4			3	4.2			71	1.38	.70
Currently	49	79.0	8	12.9	2	3.2	3	4.8			62	1.34	.77

38. Lack of Contact with Nationals

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	30	36.6	18	22.0	14	17.1	18	22.0	2	2.4	82	2.32	1.25
2-3 years	38	48.1	29	36.7	10	12.7	2	2.5			79	1.70	.79
Currently	50	74.6	13	19.4	3	4.5	1	1.5			67	1.33	.64

39. Too Much Contact with Nationals

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	50	82.0	8	13.1	2	3.3	1	1.6			61	1.25	.60
2-3 years	53	81.5	5	7.7	4	6.2	3	4.6			65	1.34	.80
Currently	49	86.0	5	8.8	1	1.8	2	3.5			57	1.23	.66

40. Relationships with Team-Members

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	54.8	22	35.5	3	4.8	3	4.8			62	1.60	.80
2-3 years	35	46.7	30	40.0	6	8.0	4	5.3			75	1.72	.83
Currently	40	60.6	16	24.2	4	7.6	4	7.6			66	1.62	.92

41. Relationships with Government Officials

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	31	66.0	9	19.1	1	2.1	5	10.6	1	2.1	47	1.64	1.09
2-3 years	35	72.9	9	18.8	3	6.3	1	2.1			48	1.38	.70
Currently	34	82.9	6	14.6	1	2.4					41	1.20	.50

<sup>122</sup>Based on the means, μ cut-off at 1.75.



42. Relationships with Community Ldrs.

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	38	62.3	17	27.9	4	6.6	2	3.3			61	1.51	.77
2-3 years	44	63.8	22	31.9	1	1.5	2	2.9			69	1.44	.67
Currently	51	87.9	6	10.3	1	1.7					58	1.14	.40

43. Relationships with Local Churches

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	46	69.7	11	16.7	8	12.1	1	1.5			66	1.45	.77
2-3 years	48	69.6	18	26.1	2	2.9	1	1.5			69	1.36	.62
Currently	51	83.6	10	16.4							61	1.16	.37

44. Relationships with Spouse

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	38	53.5	23	32.4	9	12.7	1	1.4			71	1.62	.76
2-3 years	41	57.7	23	32.4	6	8.5	1	1.4			71	1.54	.71
Currently	47	78.3	11	18.3			2	3.3			60	1.28	.64

45. Relationships with One's Children

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	44	71.0	15	24.2	3	4.8					62	1.34	.57
2-3 years	47	71.2	14	21.2	5	7.6					66	1.36	.62
Currently	42	76.4	10	18.2	2	3.6	1	1.8			55	1.31	.63

46. Relationships w/ Opposite Sex

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	54	81.8	12	18.2							66	1.18	.39
2-3 years	58	86.6	9	13.4							67	1.13	.34
Currently	42	76.4	10	18.2	2	3.6	1	1.8			55	1.31	.63

47. Relationships w/ Same Sex

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	58	82.9	11	15.7	1	1.4					70	1.19	.43
2-3 years	58	81.7	13	18.3							71	1.18	.39
Currently	56	90.3	5	8.1	1	1.6					62	1.11	.37

48. Relationships with Home Constituency (Support Base)

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	58	80.6	12	16.7	2	2.8					72	1.22	.48
2-3 years	62	83.8	12	16.2							74	1.16	.37
Currently	56	90.3	5	8.1	1	1.6					62	1.13	.46

Time does not necessarily reduce problems with interpersonal relationships. For example, there is very little difference in the mean of “too much contact with missionaries,” “too much contact with nationals,” “relationships with team-members,” “relationship with one’s children,” and “relationship with home constituency.” There is actually a rise in the

intensity of problems in “lack of contact with missionaries” as well as “too much contact with nationals” from first year to second/third year missionaries. There is little difference between first year and fourth year+ missionaries on “too much contact with nationals.” Subjects who have been in the culture for more than four years actually have more problems than those in their first term in their relationships with team-members and with the opposite sex. Both second/third year and fourth year+ subjects showed more problems than first year subjects in relationships with same sex individuals.

In their first year, subjects identified the following (in order based on the means,  $\mu$  cut-off at 1.60) as their leading problem areas: 1) lack of contact with nationals (possibly from a sense of isolation in language/culture learning programs), 2) lack of contact with fellow missionaries, 3) relationships with government officials, 4) relationship with spouse, and 5) relationships with team-members. Second/third year subjects identified the following (in order based on the means,  $\mu$  cut-off at 1.50) as their leading problem areas: 1) lack of contact with missionaries, 2) relationships with team-members, 3) lack of contact with nationals, and 4) relationship with spouse. Fourth year+ identified the following ( $\mu$  cut-off at 1.30): 1) relationships with team-members, 2) too much contact with fellow missionaries, 3) lack of contact with nationals, 4) relationships with one’s children, and 5) relationships with opposite sex. Interestingly, all three groups identified lack of contact with nationals as a leading problem in this area (keeping in mind that all means hovered between “rarely” and “some.”

Series 5: Problems with Intercultural Contact

49. Communication in Local Language

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	1	1.2	8	9.3	10	11.6	32	37.2	35	40.7	86	4.07	1.00
2-3 years	5	5.9	22	25.9	36	42.4	19	22.4	3	3.5	85	2.92	.93
Currently	36	49.3	31	42.5	6	8.2					73	1.59	.64

50. Quality/Extent of Social Life

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	22	27.8	28	35.4	15	19.0	12	15.2	2	2.5	79	2.29	1.11
2-3 years	26	32.5	34	42.5	14	17.5	5	6.3	1	1.3	80	2.01	.93
Currently	34	50.0	28	41.2	4	5.9	2	2.9			68	1.02	.73

51. Extent and Quality of Friendships with Nationals

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	25	30.1	16	19.3	12	14.5	23	17.7	7	8.4	83	2.65	1.38
2-3 years	30	37.5	28	35.0	18	22.5	4	5.0			80	1.95	.90
Currently	48	66.7	19	26.4	3	4.2	2	2.8			72	1.43	.71



52. Extent and Quality of Friendships with Own Countrymen

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	40	54.1	24	32.4	4	5.4	6	8.1			74	1.68	.91
2-3 years	44	57.1	24	31.2	4	5.2	5	6.5			77	1.61	.86
Currently	43	64.2	18	26.9	4	6.0	2	3.0			67	1.48	.75

53. Independence Experienced in Country

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	27	34.6	13	16.7	11	14.1	19	24.4	8	10.3	78	2.59	1.44
2-3 years	32	42.1	20	26.3	18	23.7	5	6.6	1	1.3	76	1.99	1.03
Currently	50	76.9	10	15.4	3	4.6	2	3.1			65	1.34	.71

54. Comfort with National Church Goals and Aspirations

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	27	43.5	15	24.2	9	14.5	11	17.7			62	2.06	1.14
2-3 years	28	38.4	30	41.1	11	15.1	4	5.5			73	1.88	.87
Currently	37	56.9	20	30.8	4	6.2	4	6.2			65	1.62	.86

55. Proper Balance of Time Spent with Nationals and with Family

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	24	35.8	24	35.8	9	13.4	9	13.4	1	1.5	67	2.09	1.08
2-3 years	21	28.4	31	41.9	14	18.9	8	10.8			74	2.12	.95
Currently	31	48.4	26	40.6	3	4.7	4	6.3			64	1.69	.83

Each of these problem areas related to intercultural contact shows improvement over time, except for “proper balance of time spent with nationals and with family” where second and third year subjects had the greatest difficulty learning to balance ministry demands and family needs. In their first year, subjects identified the following (in order based on the means,  $\mu$  cut-off at 2.50) as their leading problem areas: 1) communication in the local language, 2) extent and quality of friendships with nationals, and 3) independence experienced in the country. Second/third year problems were identified in order ( $\mu$  cut-off at 1.90) as: 1) communication in the local language, 2) proper balance of time spent with nationals and with family, 3) independence experienced in the country, and 4) extent and quality of friendships with nationals. Fourth+ year problems were identified in order ( $\mu$  cut-off at 1.50) as: 1) proper balance of time spent with nationals and with family, 2) comfort with national church goals and aspirations, and 3) communication in the local language.

Series 6: Problems with Work Habits

56. Lack of Motivation

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	44	57.1	22	28.6	6	7.8	5	6.5			77	1.64	.89
2-3 years	48	61.5	20	25.6	8	10.3	1	1.3	1	1.3	78	1.55	.83
Currently	45	63.4	21	29.6	2	2.8	3	4.2			71	1.48	.75

57. Lack of Direction from Leaders

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	35	49.3	22	31.0	10	14.1	3	4.2	1	1.4	71	1.77	.94
2-3 years	35	44.3	31	39.2	9	11.4	3	3.8	1	1.3	79	1.78	.89
Currently	49	68.1	16	22.2	5	6.9	2	2.8			72	1.44	.75

58. Poor Work Habits

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	37	47.4	34	43.6	5	6.4	2	2.6			78	1.64	.72
2-3 years	37	46.8	37	46.8	4	5.1	1	1.3			79	1.61	.65
Currently	38	55.1	28	40.6	3	4.4					69	1.49	.58

59. Insufficient Opportunity to Use Spiritual Gifts

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	45.3	19	25.3	9	12.0	11	14.7	2	2.7	75	2.04	1.19
2-3 years	43	54.4	25	31.6	9	11.4	2	2.5			79	1.62	.79
Currently	50	76.9	14	21.5	1	1.5					65	1.25	.47

60. Insufficient Training to Do Work

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	33	46.5	19	26.8	8	11.3	9	12.7	2	2.8	71	1.99	1.16
2-3 years	34	44.7	26	34.2	9	11.8	5	6.6	2	2.6	76	1.88	1.03
Currently	41	60.3	21	30.9	4	5.9	2	3.0			68	1.51	.74

61. Responsibilities Don't Fit Skills/Training

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	38	59.4	16	25.0	6	9.4	2	3.1	2	3.1	64	1.66	1.00
2-3 years	43	57.4	23	30.7	6	8.0	2	2.7	1	1.3	75	1.60	.85
Currently	51	78.5	12	18.5	2	3.1					65	1.25	.50

62. Lack of Evaluation, Advice, Counsel

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	47.1	21	29.2	7	9.7	7	9.7	3	4.2	72	1.94	1.16
2-3 years	35	46.7	23	30.7	10	13.3	6	8.0	1	1.3	75	1.87	1.02
Currently	41	63.1	14	21.5	8	12.3	1	1.5	1	1.5	65	1.57	.88

63. Balancing Time in All Areas of Life

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	18	23.7	35	46.1	12	15.8	10	13.2	1	1.3	76	2.22	1.00
2-3 years	30	24.4	34	41.5	19	23.2	8	9.8	1	1.2	82	2.22	.97
Currently	19	26.8	38	53.5	13	18.3	1	1.4			71	1.94	.71

64. Effective Daily Schedule

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	31	38.8	32	40.0	10	12.5	5	6.3	2	2.5	80	1.94	1.00
2-3 years	25	30.1	43	51.8	11	13.3	2	2.4	2	2.4	83	1.95	.87
Currently	29	39.3	33	44.6	9	12.2	2	2.7	1	1.4	74	1.82	.85



65. Insufficient Leisure Time

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	36	45.6	24	30.4	13	16.5	4	5.1	2	2.5	79	1.89	1.03
2-3 years	28	33.7	30	36.1	16	19.3	8	9.6	1	1.2	83	2.08	1.01
Currently	22	30.1	32	43.8	10	13.7	8	11.0	1	1.4	73	2.10	1.00

66. "Politicking" in Mission

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	41	68.3	11	18.3	4	6.7	3	5.0	1	1.7	60	1.53	.95
2-3 years	42	61.8	12	17.6	10	14.7	4	5.9			68	1.65	.94
Currently	45	73.8	10	16.4	5	8.2	1	1.6			61	1.37	.71

67. Handling Personal & Mission Funds

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	52	73.2	14	19.7	4	5.6	1	1.4			71	1.37	.72
2-3 years	52	73.2	14	19.7	4	5.6	1	1.4			71	1.37	.72
Currently	49	76.6	10	15.6	4	6.3			1	1.6	64	1.34	.74

68. Personal Role in Culture & Mission

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	40	54.8	21	28.8	7	9.6	4	5.5	1	1.4	73	1.70	.95
2-3 years	47	60.3	23	29.5	5	6.4	3	3.6			78	1.54	.78
Currently	52	78.8	13	19.7	1	1.5					66	1.23	.46

This series has to do with work habits, so there is no set pattern that emerges as there was with the series related to acculturation. Because of the time needed for language and culture learning and for settling in during the first term, there is not a lot a difference between the first two groups but a considerable change to the fourth+ in problems related to "lack of direction from leaders," "poor work habits," "sense of insufficient training for the task," "balancing time in all areas of life," and "discomfort from politicking in the mission." All three groups are nearly the same in problem-levels related to "lack of motivation," lack of evaluation, advice, and counsel," "maintaining effective daily schedules," "insufficient leisure time," and "handling personal and mission funds." First year subjects showed frustration over "insufficient opportunity to use spiritual gifts" and "responsibilities not fitting skills and training" both of which are understandable since the first year is so taken up with language and culture learning.

In their first year, subjects identified the following (in order based on the means,  $\mu$  cut-off at 1.90) as their leading problem areas: 1) balancing time in all areas of life, 2) insufficient opportunity to use spiritual gifts, 3) insufficient training to do the work, 4) lack of evaluation, advice, and counsel, and 5) maintaining effective daily schedule. Second/third year problems were identified in order ( $\mu$  cut-off at 1.80) as: 1) balancing time in all areas of

life, 2) insufficient leisure time, 3) maintaining effective daily schedule, 4) insufficient training to do the work, and 5) lack of evaluation, advice, and counsel. Fourth+ year problems were identified in order ( $\mu$  cut-off at 1.50) as: 1) insufficient leisure time, 2) balancing time in all areas of life, 3) maintaining effective daily schedule, 4) lack of evaluation, advice, and counsel, and 5) insufficient training to do the work.

### Series 7: Problems with Ministry

#### 69. Maintaining Devotional Habits

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely.		2=Some		3=Often		4=Freq.		5=Always				
1st year	19	24.1	31	39.3	18	22.8	9	11.4	2	2.5	79	2.29	1.04
2-3 years	17	21.0	37	45.7	18	22.2	7	8.6	2	2.5	81	2.26	.97
Currently	24	32.4	34	45.9	13	17.6	2	2.7	1	1.4	74	1.95	.86

#### 70. Certainty of Personal Faith and Spiritual Life

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	51	65.4	19	24.4	2	2.6	5	6.4	1	1.3	78	1.54	.92
2-3 years	48	61.5	21	26.9	8	10.3	1	1.3			78	1.53	.78
Currently	52	75.4	15	21.7	1	1.5	1	1.5			69	1.30	.65

#### 71. Personal Church Background *vrs.* National Church Function

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	44	62.0	24	33.8	1	1.4	2	2.8			71	1.45	.67
2-3 years	48	63.2	18	23.7	9	11.8	1	1.3			76	1.51	.76
Currently	53	82.8	9	14.1	2	3.12					64	1.20	.48

#### 72. Demographic Study for Effective Planning

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	18	45.0	10	25.0	5	12.5	4	10.0	3	7.5	40	2.10	1.30
2-3 years	21	47.7	15	34.1	4	9.1	2	4.6	2	4.6	44	1.84	1.08
Currently	19	44.2	19	44.2	3	7.0	1	2.3	1	2.3	43	1.74	.88

#### 73. Ability to do Ethnographic Study

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	10	35.7	7	25.0	6	21.4	2	7.1	3	10.7	28	2.32	1.33
2-3 years	13	41.9	9	29.0	7	22.6	2	6.5			31	1.94	.96
Currently	17	54.8	8	25.8	5	16.1	1	3.2			31	1.68	.87

#### 74. Preparing Creative and Culturally Fitting Gospel Presentations

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	16	26.7	19	31.7	14	23.3	9	15.0	2	3.3	60	2.37	1.13
2-3 years	20	27.8	32	44.4	13	18.1	6	8.3	1	1.4	72	2.11	.96
Currently	30	46.2	29	44.6	6	9.2					65	1.63	.65



75. Preparation and Use of Culturally Usable Visual Aids

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	19	35.8	12	22.6	12	22.6	8	15.1	2	3.8	53	2.28	1.21
2-3 years	22	32.8	28	41.8	10	14.9	6	9.0	1	1.5	67	2.04	.99
Currently	36	59.0	22	36.1	2	3.3	1	1.6			61	1.48	.65

76. Effective Follow-up/Discipleship

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	18	33.3	14	25.9	14	25.9	6	11.1	2	3.7	54	2.26	1.15
2-3 years	20	29.4	22	32.4	17	25.0	8	11.8	1	1.5	68	2.24	1.05
Currently	33	50.0	22	33.3	7	10.6	3	4.6	1	1.5	66	1.74	.93

77. Working in Teams

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	35	59.3	13	22.0	7	11.9	3	5.1	1	1.7	59	1.68	.99
2-3 years	36	48.0	24	32.0	11	14.7	3	4.0	1	1.3	75	1.79	.93
Currently	45	64.3	20	28.6	3	4.3	2	2.9			70	1.46	.72

78. Analyzing and Resolving Cross-Cultural Conflict

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	17	25.4	16	23.9	14	20.9	14	20.9	6	9.0	67	2.64	1.31
2-3 years	22	30.6	30	41.7	15	20.8	5	6.9			72	2.04	.90
Currently	30	46.9	29	45.3	4	6.3	1	1.6			64	1.63	.68

79. Planning/Implementing Church Planting

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	10	23.8	13	31.0	12	28.6	5	11.9	2	4.8	42	2.43	1.13
2-3 years	13	22.0	28	47.5	12	20.3	4	6.8	2	3.4	59	2.22	.98
Currently	28	50.0	22	39.3	5	8.9	1	1.8			56	1.64	.80

80. Discovering/Using Resources for Ministry

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	11	21.6	13	25.5	13	25.5	12	23.5	2	3.9	51	2.63	1.18
2-3 years	14	21.9	26	40.6	18	28.1	4	6.3	2	3.1	64	2.28	.98
Currently	27	46.6	23	39.7	4	6.9	4	6.9			58	1.74	.87

This series relates to problems in ministry. The ministry development of missionary subjects (that is, a clear reduction of their problem-intensity levels) over time is obvious in all areas listed above. The only area which is nearly the same for all is “maintaining devotional habits.” However, it is also clear that *for many areas the number of subjects answering dropped almost by half, indicating that a number simply didn’t know how to answer, and of those who did answer in the fourth+ year bracket, a significant number appeared in the “often,” “frequently,” and “always” categories.*

In their first year, subjects identified the following (in order based on the means, μ cut-off at 2.30) as their leading problem areas: 1) analyzing and resolving cross-cultural

conflict, 2) discovering and using resources for ministry, 3) planning and implementing church planting, 4) preparing creative and culturally fitting Gospel presentations, and 5) ability to do ethnographic studies. Second/third year problems (with  $\mu$  cut-off at 2.10) were identified in order as: 1) discovering and using resources for ministry, 2) maintaining devotional habits, 3) effective follow-up and discipleship, 4) planning and implementing church planting, 5) preparing creative and culturally fitting Gospel presentations, and 6) ability to do ethnographic studies. Fourth+ year problems (with  $\mu$  cut-off at 1.60) were identified in order as: 1) maintaining devotional habits, 2) effective follow-up and discipleship, 3) demographic study for effective planning, 4) discovering and using resources for ministry, 5) planning and implementing church planting, 6) preparing creative and culturally fitting Gospel presentations, 7) analyzing and resolving cross-cultural conflict, and 8) ability to do ethnographic studies.

### Series 8: Problems with Affect and Ministry

#### 81. How/When to Express Anger

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	27	34.2	32	40.5	15	19.0	2	2.5	3	3.8	79	2.01	.99
2-3 years	31	37.8	40	48.8	8	9.8	2	2.4	1	1.2	82	1.80	.81
Currently	45	61.6	24	32.9	3	4.1	1	1.4			73	1.47	.71

#### 82. Personal Depression

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	34	50.7	17	25.4	7	10.4	7	10.4	2	3.0	67	1.90	1.14
2-3 years	31	43.7	29	40.8	7	9.9	3	4.2	1	1.4	71	1.79	.89
Currently	33	51.6	24	37.5	4	6.3	3	4.7			64	1.64	.80

#### 83. Anxiety Initiating Relationships with Nationals

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	23	29.9	17	22.1	18	23.4	13	16.9	6	7.8	77	2.51	1.29
2-3 years	34	43.0	29	36.7	12	15.2	3	3.8	1	1.3	79	1.83	.92
Currently	49	74.2	15	22.7	1	1.5	1	1.5			66	1.33	.71

#### 84. Fear of People

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	32	43.2	19	25.7	12	16.2	9	12.2	2	2.7	74	2.05	1.16
2-3 years	43	57.3	23	30.7	6	8.0	2	2.7	1	1.3	75	1.60	.85
Currently	50	74.6	16	23.9	1	1.5					67	1.27	.48

#### 85. Fear for Family Security

Field Year	n	%	n	%	n	%	n	%	n	%	N	$\mu$	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	42	60.9	15	21.7	7	10.1	4	5.8	1	1.5	69	1.65	.98
2-3 years	45	60.2	16	21.3	12	16.0	2	2.7			75	1.61	.85
Currently	40	60.6	18	27.3	7	10.6	1	1.5			66	1.53	.75



86. Fear of Political Upheaval

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	47	67.1	10	14.3	8	11.4	4	5.7	1	1.4	70	1.60	1.00
2-3 years	50	70.4	13	18.3	6	8.5	1	1.4	1	1.4	71	1.45	.82
Currently	38	58.5	18	27.7	5	7.7	3	4.6	1	1.5	65	1.63	.93

87. Discontent with Fellow Missionaries

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	40	54.1	24	32.4	6	8.1	4	5.4			74	1.65	.85
2-3 years	34	41.5	37	45.1	6	7.3	4	4.9	1	1.2	82	1.79	.87
Currently	37	51.4	28	38.9	4	5.6	3	4.2			72	1.63	.78

88. Discontent with Mission Leadership

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	45	68.2	13	19.7	5	7.6	3	4.6			66	1.48	.83
2-3 years	47	65.3	18	25.0	5	7.0	2	2.8			72	1.47	.75
Currently	43	67.2	17	26.2	1	1.6	2	3.1	1	1.6	64	1.45	.82

89. Discontent with Ministry Assignment

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	50	82.0	10	16.4	1	1.6					61	1.20	.44
2-3 years	58	80.6	11	15.3	3	4.2					72	1.24	.52
Currently	52	78.8	12	18.2	2	3.0					66	1.24	.50

90. Handling Extreme Local Poverty

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	20	27.8	26	36.1	16	22.2	6	8.3	4	5.6	72	2.28	1.13
2-3 years	22	28.2	29	37.2	17	21.8	8	10.3	2	2.6	78	2.22	1.05
Currently	25	36.2	31	44.9	7	10.1	4	5.8	2	2.9	69	1.94	.98

91. Anxiety over Personal Finances

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	48	64.9	12	16.2	7	9.5	5	6.8	2	2.7	74	1.66	1.08
2-3 years	49	62.8	20	25.6	6	7.7	3	3.9			78	1.53	.80
Currently	47	70.1	17	25.4	2	3.0	1	1.5			67	1.36	.62

92. Physical Burnout

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	48	71.6	15	22.4	2	3.0	2	3.0			67	1.37	.69
2-3 years	43	59.7	16	22.2	12	16.7	1	1.4			72	1.60	.82
Currently	30	45.5	28	42.4	5	7.6	2	3.0	1	1.5	66	1.73	.85

93. Emotional Burnout

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	47	68.1	14	20.3	4	5.8	4	5.8			69	1.49	.85
2-3 years	40	54.8	18	24.7	12	16.4	3	4.1			73	1.70	.89
Currently	35	53.8	21	32.3	4	6.2	3	4.6	2	3.1	65	1.71	1.00

94. Spiritual Burnout

Field Year	n	%	n	%	n	%	n	%	n	%	N	μ	SD
	1=Rarely		2=Some		3=Often		4=Freq.		5=Always				
1st year	48	68.6	16	22.9	2	2.9	4	5.7			70	1.46	.81
2-3 years	44	57.9	25	32.9	2	2.6	5	6.6			76	1.58	.84
Currently	49	72.1	15	22.1	2	2.9	1	1.5	1	1.5	68	1.38	.75

Series 8 measures the level of emotional stressors. Note that while the mean is less than 2.51, all but one area for the first two time-categories has entries up to “always,” and most fourth year+ have entries up to “frequently” and some “always.” While the intensity of problems tends to diminish over time, in some cases it actually increases. Fourth year+ subjects have more problems than do the other two categories with “discontent with mission leadership,” and with “discontent with ministry assignment.” The intensity of physical and emotional burnout stress actually increases over time, with those in the “current” bracket showing the highest problem levels. All three groups show nearly the same problem-levels with “spiritual burnout,” “discontent with fellow missionaries,” “handling extreme local poverty,” “fear for family security,” and “fear of political upheaval.”

In their first year, subjects identified the following (in this order based on the means with an  $\mu$  cut-off at 1.90) as their leading problem areas: 1) anxiety in initiating relationships with nationals, 2) handling extreme local poverty, 3) fear of people, 4) knowing when and how to express anger, and 5) personal depression. Second/third year problems (with an  $\mu$  cut-off at 1.70) were identified in order as: 1) handling extreme local poverty, 2) anxiety in initiating relationships with nationals, 3) knowing when and how to express anger, 4) discontent with fellow missionaries, 5) personal depression, and 6) emotional burnout. Fourth+ year problems (with an  $\mu$  cut-off at 1.60) were identified in order as: 1) handling extreme local poverty, 2) physical burnout, 3) emotional burnout, 4) personal depression, 5) fear of political upheaval, and 6) discontent with fellow missionaries.

Multiple Regression Analysis

The design of this study was concurrent rather than longitudinal, the only way that on-field predictors of cross-cultural ministry competence could be obtained, utilizing subjects who had been on the field from more than one year to over 25 years. It has been assumed that the independent variables, as predictors (the character traits, education/training, and spiritual dimensions) should be predictive of competence at any stage on the field. On this basis, there should be significant correlation between dependent and independent variables, resulting in meaningful predictors.

The statistical procedure of multiple regression was used in order 1) to discover these comparative relationships between predictor and criterion variables--the collective contributions of the independent variables to variations in dependent variables, that is, the



predictive relationship of dependent (predictor) variables to the independent (criterion) variables--and, 2) to find the most parsimonious groups of independent variables which relate to and explain each dependent scale. First, to see if correlations between dependent and independent variables do exist, matrices of correlations between dependent and independent variables from various scales were developed (and can be seen in Appendix 8). Results show that there is generally very low overlap between dependent and independent factors.

Then a forward step-wise multiple regression procedure was applied.<sup>123</sup> In this regression process, the “forward” selection procedure selected the next independent variable which had the highest partial correlation with the dependent variable on the basis of the largest partial F-ratio. New F-ratios were then computed and all variables (even those previously entered) were re-evaluated. If a variable’s F-ratio became less than the value previously determined, it was removed from the model. This forward step-wise procedure continued until no variables in the equation could be removed and the variable with the highest partial correlation not in the equation failed the F-to-Enter test.<sup>124</sup> Final results were tested through a second manual (add-deletion) process to determine if rectification of extreme outliers (extraordinary datapoints) or significant skew makes any difference to the regression analysis.<sup>125</sup> Tables 52-96 present the results of the step-wise multiple regression analyses.

Multiple regression coefficients must be interpreted more carefully than simple regression coefficients, since all are tied together as a group and must be interpreted as such. It is important to keep in mind that the values of  $R$  and  $R^2$  increase as new predictors are added so that the predictive validity of an independent variable is in *combination with* the predictive validity of the other variables. Since the value of  $R^2$  always increases as new predictors are added, the Adjusted  $R^2$  is valuable since it accounts for this effect and will not improve with a useless predictor.

For each table below presenting the results of step-wise multiple regression, the standardized correlation coefficients are those obtained from the final step in the regression analysis. “ $R^2$ ” measures the fraction of the variability of the entered predictor variable accounted for by its least squares linear regression on the criterion (dependent) variable.

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<sup>123</sup>Generally, in step-wise multiple regression, all independent variables (in this case 46) are examined against the first dependent variable to see which has the best predictive relationship. Then the remaining 45 scales are examined against the same dependent factor to see if a second significant predictor emerges. If one does, the remaining 44 scales are examined against the same dependent factor to see if another significant predictor emerges. The process continued until no further significant predictors were gained. The same procedure is undertaken for each of the dependent variables.

<sup>124</sup>Daniel S. Feldman, Jr. et al., Statview II, (Berkeley, CA: Abacus Concepts, Inc., 1986), pp. 187-188.

<sup>125</sup>This manual add-delete process was undertaken with an “exploratory data analysis” (EDA) program, DataDesk Professional. It also verified the step-wise regression undertaken under Statview II.

“ $R^2$ (adjusted)” refers to the multiple linear correlation coefficient between the entered predictor variable and the criterion (dependent) variable adjusted to account for the addition of new or previous variables in the equation. Since the  $R^2$  and  $R^2$ (adjusted) are cumulative only the final step values are given. “Partial-F” stands for “F-to-Remove,” the point at which items included are beyond the 3.953 F-to-Remove cut-off point (acceptable for DF 1-90). Listings under “Partial-F” are taken from the final step of the regression analysis and show the factor-ratio partials of all items in the regression model. *The higher the value of the “Partial-F” the higher its significance in regression with the dependent variable.*

“F” refers to the Factor-ratio test, the level at which the variable is factored in or left out of the regression equation, making it the measure which determines significance. The cumulative (last-step) level is the only one given in the table. “T-ratio” stands for the t-ratio used to construct confidence levels, derived by dividing the coefficient by the standardized error. The higher the T-ratio, the more likely the rejection of the null hypothesis. All T-ratios with a value higher than 2.0 have a probability  $<.05$ . All items included in these tables have a T-ratio cut-off point of 2.0. “P” stand for the P-value, the tail-probability of the F - distribution.

Interpretation of the predictive relationships of the independent factors with the dependent is affected by the way that the questions (variables) comprising the factor were written<sup>126</sup> and by significantly negative Pearson Product-Moment correlations. In the tables a star (\*) indicates that the interpretation should take into account the need to reverse (R) the emphasis of the factor or the possibility that the coefficient sign has been negatively influenced by the interaction of other factors in the regression indicated by a significant Pearson correlation (P).<sup>127</sup> When both reverse (R) and a significant Pearson correlation (P) are suggested, the direction has been reversed twice. The probable factor direction is indicated in the column identified by an arrow (➡).

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<sup>126</sup>For example, in ID5 “Probity/Respect for Laws and Customs” its variables were actually written as the opposite, that is, of “disrespect” (i.e. “People in a foreign country should not have to live by its laws”). The variable in this factor had a mean of only 1.61 indicating that most missionaries disagreed with this statement. Because of the negative factor orientation, in regression analysis it will likely come up as a negative, which would be acceptable if the factor had been named “Disrespect.” However, in line with the title “Probity/Respect for Laws and Customs” this predictor has to be reversed and read as a positive.

<sup>127</sup>A Pearson correlation of  $-.21$  is significant enough ( $p < 0.05$ ) to require a reversal of the coefficient sign. It was determined that  $|r| > .21$  (significant at 0.05) by using the following formula (sample  $n=91$ ):  $2 = \sqrt{F(r/R(89), R(1-r^2))}$ .



Table 52: Multiple Regression Results for D1  
“Adjustment to Culture and Ministry”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	⇒
1.	ID18 Empathy	.256	4.575	2.497		+
2.	ID29 Ability to Work Harmoniously with Others	.314	6.744	2.311		+
3.	ID8 Risk-taking/Openness to People and Experiences	.266	4.589	2.287	P/R	+
R <sup>2</sup> = .153; R <sup>2</sup> (adj)= .124; F= 5.23; P=<.05						

Table 53: Multiple Regression Results for D2  
“Physical and Psychological Health”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	⇒
1.	ID29 Ability to Work Harmoniously with Others	-.287	6.535	2.102	P	+
2.	ID25 Sense of Well-being with Life and Work	.253	6.357	2.117		+
3.	ID24 Language Learning Development	.242	5.205	2.154		+
4.	ID3 Positive Interpersonal Attitudes/Interaction	-.224	4.267	2.162	R	+
R <sup>2</sup> = .179; R <sup>2</sup> (adj)= .140; F=4.68; P=<.05						

Table 54: Multiple Regression Results for D3  
“Satisfaction with Ministry Development/Progress”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	⇒
1.	ID22 Commitment to Learning	-.436	16.148	-4.02	P	+
2.	ID25 Sense of Well-being with Life and Work	.304	8.801	2.97		+
3.	ID16 Sociability	-.235	4.305	-2.07	P	+
R <sup>2</sup> = .252; R <sup>2</sup> (adj)= .226; F=9.75; P=<.05						

Table 55: Multiple Regression Results for D4  
“Interpersonal Interaction with Nationals”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	⇒
1.	MID4 Self-controlled Tactfulness	-.306	7.224	-2.69	P	+
2.	ID35 Prayer-Life	.290 <sup>128</sup>	8.802	2.97		+
3.	ID40 Godliness of Life Before People	.219	4.900	2.21		+
4.	ID20 Development of Communication Skills	.228	4.468	2.11		+
R <sup>2</sup> = .221; R <sup>2</sup> (adj)= .184; F=6.09; P=<.05						

<sup>128</sup>Two of the variables association with “Interpersonal Interaction” are spiritual values. These appear to be critical for when variables ID31-40 (“Real” Spiritual Values) are removed from the regression model, only one variable correlates significantly, MID4 “Tactfulness vs. Frankness,” included above.

Table 56: Multiple Regression Results for D5  
“Satisfaction with and Commitment to Ministry”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID3 Positive Interpersonal Attitudes/Interaction	-.255	5.37	-2.34	P	+
2.	ID25 Sense of Well-being with Life and Work	.240	5.878	2.42		+
3.	ID21 Development of Interpersonal Skills	.308	7.569	2.75		+
4.	ID5 Probity/Respect for Laws and Customs	-.234	4.431	-2.11		-
R <sup>2</sup> = .201; R <sup>2</sup> (adj)= .163; F=5.40; P=<.05						

Table 57: Multiple Regression Results for D6  
“Satisfaction with Social Interaction”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	MID3 Deliberation/Cautiousness	.356	12.668	3.56		+
2.	MID2 Disciplined Confidence	-.278	7.695	-2.77	P	+
3.	ID22 Commitment to Learning	-.247	6.523	-2.55	P	+
R <sup>2</sup> = .239; R <sup>2</sup> (adj)= .213; F=9.12; P=<.05						

Table 58: Multiple Regression Results for D7<sup>129</sup>  
“Adequate Social Interaction”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID17 Situational Sensitivity	-.350	11.796	-3.43	P/R/R	+
2.	ID16 Sociability	.219	8.320	2.88	R	-
3.	ID31 Right Relationships/Concern for People	-.213	7.329	-2.71	R	+
4.	ID37 Dealing with Spiritual Realities	.239	6.576	2.56	R	-
5.	ID22 Commitment to Learning	-.256	6.512	-2.55	P/R	-
6.	ID19 Family Adaptation to Schooling Situation	-.216	4.954	-2.23	R	+
7.	ID9 Initiative	-.212	4.558	-2.14	R	+
8.	ID21 Development of Interpersonal Skills	-.209	4.132	-2.03	P/R	-
R <sup>2</sup> = .386; R <sup>2</sup> (adj)= .326; F=6.45; P=<.05						

<sup>129</sup>D7 should have been entitled “Loneliness” because the single variable on which this factor is based was written: “Do you feel lonely?” A positive response required a negative position on the five-point scale (ie. 84 of 91 answered at 1 and 2--”hardly at all” and “to some extent.” Accordingly, to be understood as “adequate social interaction,” all predictors must be reversed. This is the only dependent factor requiring this. For this reason every independent factor has a R (Reverse) sign under the \*.



Table 59: Multiple Regression Results for D8  
“Commitment to Learning Culture and Country”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID34 Dependence on God	.223	6.780	2.60		+
2.	MID1 Interpersonal Skills	-.259	5.533	-2.35		-
3.	ID4 Analytical Perceptiveness/Curiosity	.245	5.258	2.29		+
4.	MID6 Persistence with Contextual Sensitivity	.222	4.112	2.03		+
R <sup>2</sup> = .185; R <sup>2</sup> (adj)= .147; F=4.87; P=<.05						

Table 60: Multiple Regression Results for D9  
“Factual Knowledge of Economic and Political Structures”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID29 Ability to Work Harmoniously with Others	.381	6.639	2.58		+
2.	ID26 Development of Confidence	-.296	4.266	-2.07		-
3.	ID28 Development of Knowledge, Skills, and Gifts	.311	4.076	2.02		+
R <sup>2</sup> = .132; R <sup>2</sup> (adj)= .102; F=4.41; P=<.05						

Table 61: Multiple Regression Results for D10  
“Factual Knowledge of Belief Structures”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID8 Risk-taking/Openness to People & Experiences	-.297	5.255	-2.29	P/R	-
2.	ID6 Confidence in Personal Skills and Judgement	-.268	4.436	-2.11	P	+
3.	ID34 Dependence on God	.212	4.165	2.04		+
R <sup>2</sup> = .130; R <sup>2</sup> (adj)= .100; F=4.34; P=<.05						

Table 62: Multiple Regression Results for D11  
“Factual Knowledge of Sociological Structures”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID8 Risk-taking/Openness to People&Experiences <sup>130</sup>	.308	4.330	2.08	R	-
2.	ID2 Tactfulness	.306	4.158	2.04	R	-
3.	ID4 Analytical Perceptiveness/Curiosity	.398	7.059	2.66		+
4.	ID17 Situational Sensitivity	-.367	5.776	-2.40	R	+
5.	ID27 Changes in Political Opinions	-.348	5.091	-2.26		-
R <sup>2</sup> = .232; R <sup>2</sup> (adj)= .187; F=5.14; P=<.05						

<sup>130</sup>The need to reverse ID8 and ID2 because of the formation of the variables ends up making them negative to D11 here. It is not clear why risk-taking and openness to people and experiences would hinder developing knowledge of sociological structures. However, too much tactfulness may militate against getting into the community and learning about the social structures.

**Table 63: Multiple Regression Results for D12  
“Understanding of Cultural Ethos and Social Structure”**

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID4	Analytical Perceptiveness/Curiosity	-.324	5.575	-2.36	P	+
2.	ID20	Development of Communication Skills	.281	4.445	2.11		+
3.	ID26	Development of Confidence	.308	5.165	2.27		+

$R^2 = .125$ ;  $R^2(\text{adj}) = .094$ ;  $F = 4.125$ ;  $P < .05$

**Table 64: Multiple Regression Results for D13  
“Understanding of Cultural Economic and Political Structure”**

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID13	Prudence/Discretion	-.437	13.843	-3.72	P	+
2.	ID1	Positive Marital/Family Relationships	.301	6.883	2.62		+
3.	ID34	Dependence on God	-.270	8.108	-2.85	P	+
4.	ID7	Self-control and Confidence	-.241	4.159	-2.04		-
			R <sup>2</sup> = .305; R <sup>2</sup> (adj)= .273; F=9.438; P=<.05				

**Table 65: Multiple Regression Results for D14  
“Understanding of History’s Influence on Culture”**

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID4	Analytical Perceptiveness/Curiosity	.342	7.128	2.67		+
2.	ID30	Capacity to Research and Strategize	.344	6.657	2.58		+
3.	ID1	Positive Marital/Family Relationships	-.377	8.528	-2.92	P	+
4.	ID19	Family Adaptation to Schooling Situation	.281	5.321	2.31		+
5.	ID29	Ability to Work Harmoniously with Others	.293	4.687	2.16		+
6.	ID6	Confidence in Personal Skills and Judgement	-.266	4.449	-2.11		-

$R^2 = .310$ ;  $R^2(\text{adj}) = .260$ ;  $F = 6.281$ ;  $P < .05$

**Table 66: Multiple Regression Results for D15  
“Insight into the Culture’s Personality”**

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID36	Maintenance of Spiritual Life	-.448	9.472	-3.08	-	
2.	ID24	Language Learning Development	.378	7.141	2.67	+	
3.	ID21	Development of Interpersonal Skills	-.383	7.077	-2.66	-	
4.	ID29	Ability to Work Harmoniously with Others	.373	6.611	2.57	+	
5.	ID26	Development of Confidence	-.283	4.261	-2.06	-	
			R <sup>2</sup> = .248; R <sup>2</sup> (adj)= .204; F=5.60; P=<.05				



Table 67: Multiple Regression Results for D16  
“Insight into Communicating through Accepted Structures”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID2	Tactfulness	.369	9.188	3.03		+
2.	ID13	Prudence/Discretion	-.261	4.641	-2.15	P	+
3.	ID30	Capacity to Research and Strategize	.259	4.317	2.08		+
R <sup>2</sup> = .164; R <sup>2</sup> (adj)= .135; F=5.68; P=<.05							

Table 68: Multiple Regression Results for D17  
“Insight into Cultural Values/Beliefs”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID5	Probity/Respect for Laws and Customs	.520	10.792	3.29		+
2.	ID23	Commitment to Personal Intellectual Develop.	-.513	10.202	-3.19		-
3.	ID28	Development of Knowledge, Skills, and Gifts	.520	9.789	3.13		+
4.	ID24	Language Learning Development	-.395	6.526	-2.55		-
5.	ID27	Changes in Political Opinions	-.322	4.171	-2.04		-
R <sup>2</sup> = .254; R <sup>2</sup> (adj)= .210; F=5.79; P=<.05							

Table 69: Multiple Regression Results for D18  
“Appreciation for Social Role Values”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID35	Prayer-life	.261	5.986	2.45		+
2.	ID1	Positive Marital/Family Relationships <sup>131</sup>	-.289	5.487	-1.93	P	+
R <sup>2</sup> = .101; R <sup>2</sup> (adj)= .081; F=5.99; P=<.05							

Table 70: Multiple Regression Results for D19  
“Appreciation for Cultural Fine Arts”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	➡
1.	ID29	Ability to Work Harmoniously With Others	.420	14.572	3.82		+
2.	ID21	Development of Interpersonal Skills	-.341	9.783	-3.13	P	+
3.	ID8	Risk-taking/Openness to People/Experienc. <sup>132</sup>	-.212	4.094	-2.02	R	+

<sup>131</sup>This variable falls just short of P<.05. When “Spiritual Values” (ID31-ID40) are removed from the regression model, this variable (ID1) comes to the fore as the only significant variable with a T-ratio of -2.34 which achieves P<.05. Presumably a strong prayer life results in deepened care for people and greater readiness to accept them. Furthermore, loving, strong, and balanced marital and family relationships with appropriate (non-rigid) roles will result in “appreciation for social role values.”

<sup>132</sup>ID8, ID13, and ID37 appear to go together. Subjects rated higher on prudence and discretion than on risk-taking, yet all claimed to appreciate national fine arts. That may be the reason for this seeming contradiction--ie. that openness to people and experiences is negatively predictive and

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
4.	ID13 Prudence/Discretion	.232	4.687	2.16		+
5.	ID37 Dealing with Spiritual Realities	-.200	4.158	-2.04		-
6.	ID31 Right Relationships/Concern for People	.173	4.494	2.12 <sup>133</sup>		+
R <sup>2</sup> = .267; R <sup>2</sup> (adj)= .215; F=5.11; P=<.05						

Table 71: Multiple Regression Results for D20  
“Appreciation for Social Customs”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID3 Positive Interpersonal Attitudes/Interaction	-.405	9.004	-3.00	P	+
2.	ID2 Tactfulness	.395	9.468	3.08		+
3.	ID4 Analytical Perceptiveness/Curiosity	.272	4.792	2.19		+
4.	ID21 Development of Interpersonal Skills	.300	5.321	2.31		+
5.	MID3 Deliberation/Cautiousness	.317	5.177	2.28		+
R <sup>2</sup> = .233; R <sup>2</sup> (adj)= .188; F=5.15; P=<.05						

Table 72: Multiple Regression Results for D21  
“Appreciation for Language”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID22 Commitment to Learning	-.362	10.561	-3.25	P	+
R <sup>2</sup> = .106; R <sup>2</sup> (adj)= .096; F=10.56; P=<.05						

Table 73: Multiple Regression Results for D22  
“Identification with Acceptable Social Fit”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID28 Development of Knowledge, Skills, and Gifts	.299	8.787	2.96		+
2.	ID14 Interpersonal Interest	-.284	8.018	-2.83	P	+
3.	MID1 Interpersonal Skills	.274	6.941	2.63		+
4.	ID9 Initiative	-.242	6.163	-2.48	P/R	-
5.	MID6 Persistence with Contextual Sensitivity	.223	4.726	2.17		+
R <sup>2</sup> = .280; R <sup>2</sup> (adj)= .238; F=6.62; P=<.05						

prudence is positively predictive of appreciation for fine arts. It is possible that there is a fear that the some of the fine arts also delve into spiritual unknowns.

<sup>133</sup>These four variables had high F-to-Remove values and when added as a group to the first two variables (which are clearly the dominant ones but not clear in their relationship to the dependent variable on their own) all achieve a probability of <.05 (having t-ratios over 2.00).



Table 74: Multiple Regression Results for D23  
“Identification with Traditional, Personal, and Interpersonal Values”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID19 Family Adaptation to Schooling Situation	-.385	20.004	-4.47	P	+
2.	MID2 Disciplined Confidence	-.319	11.051	-3.32	P	+
3.	ID12 Emotional Self-Control	-.266	8.573	-2.93	P	+
4.	MID1 Interpersonal Skills	.238	6.513	2.55		+
5.	ID29 Ability to Work Harmoniously with Others	.236	5.614	2.37		+
6.	ID6 Confidence in Personal Skills and Judgement	-.206	5.588	-2.36	P	+
7.	ID1 Positive Marital/Family Relationships	-.198	4.814	-2.19		-
R <sup>2</sup> = .403; R <sup>2</sup> (adj)= .352; F=8.00; P=<.05						

Table 75: Multiple Regression Results for D24  
“Identification with Social Communication Patterns”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	MID1 Interpersonal Skills	-.283	7.750	-2.78	P	+
2.	MID2 Disciplined Confidence	.280	7.436	2.73		+
3.	ID22 Commitment to Learning	-.250	6.350	-2.52		-
4.	ID17 Situational Sensitivity	-.232	5.424	-2.33		-
5.	ID34 Dependence on God	.178	5.078	2.25		+
6.	ID25 Sense of Well-being with Life & Work	.196	4.513	2.12		+
R <sup>2</sup> = .291; R <sup>2</sup> (adj)= .240; F=5.75; P=<.05						

Table 76: Multiple Regression Results for D26<sup>134</sup>  
“Enjoyment of Social Activities/Interaction”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID25 Sense of Well-being with Life & Work	.419	12.065	3.47		+
2.	ID22 Commitment to Learning	-.312	5.706	-2.39	P	+
3.	ID31 Right Relationships/Concern for People	.218	4.812	2.19		+
R <sup>2</sup> = .192; R <sup>2</sup> (adj)= .165; F=6.91; P=<.05						

<sup>134</sup>No independent variables identified in the regression for “Identification with Social Role Values (D25).”

Table 77: Multiple Regression Results for D28<sup>135</sup>  
“Enjoyment of National Arts/Hobbies”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID11 Persistence	-.281	5.724	2.39	R	+
2.	ID12 Emotional Self-Control	-.274	5.231	-2.29	P/R	-
$R^2 = .150$ ; $R^2(\text{adj}) = .121$ ; $F = 5.12$ ; $P < .05$						

Table 78: Multiple Regression Results for D29  
“Cultural Involvement and Research Skills”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID31 Right Relationships/Concern for People	.408	17.172	4.14		+
2.	ID25 Sense of Well-being with Life & Work	.488	15.913	3.99		+
3.	ID23 Commitment to Personal Intellectual Develop.	-.296	5.177	-2.28		-
4.	ID38 Spiritual Gifting for Ministry	-.276	5.171	-2.27		-
$R^2 = .280$ ; $R^2(\text{adj}) = .246$ ; $F = 8.35$ ; $P < .05$						

Table 79: Multiple Regression Results for D30  
“Contextualized Church Development Skills”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID39 Dependence on the Holy Spirit	.330	9.956	3.10		+
2.	ID20 Development of Communication Skills	-.345	7.448	-2.73	P	+
3.	MID2 Disciplined Confidence	.300	4.817	2.19		+
$R^2 = .192$ ; $R^2(\text{adj}) = .164$ ; $F = 6.87$ ; $P < .05$						

Table 80: Multiple Regression Results for D31  
“Change-Agent Skills”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID20 Development of Communication Skills	.479	12.381	3.51		+
2.	ID18 Empathy	.302	4.441	2.11		+
3.	ID17 Situational Sensitivity	-.293	4.281	-2.07		-
$R^2 = .209$ ; $R^2(\text{adj}) = .182$ ; $F = 7.67$ ; $P < .05$						

Table 81: Multiple Regression Results for MD1  
“Contextualization of Ministry”

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	➡
1.	ID28 Development of Knowledge, Skills, and Gifts	.258	4.594	2.14		+
$R^2 = .049$ ; $R^2(\text{adj}) = .038$ ; $F = 4.59$ ; $P < .05$						

<sup>135</sup>No independent variables identified in the regression for “Enjoyment of National Recreational Activities (D27).”



Table 82: Multiple Regression Results for MD2  
“Commitment to Creative/Viable Ministry”

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. MID5 Personal Life Maintenance	.439	21.721	4.66		+
2. MID1 Interpersonal Skills	.418	20.395	4.52		+
3. ID22 Commitment to Learning	-.218	5.858	-2.42	P	+
4. ID21 Development of Interpersonal Skills	.196	4.554	2.13		+
$R^2 = .383$ ; $R^2(\text{adj}) = .354$ ; $F = 13.35$ ; $P < .05$					

Table 83: Multiple Regression Results for MD3  
“Adequate Ministry Education/Training”

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. MID2 Disciplined Confidence	.469	25.826	5.08		+
2. ID34 Dependence on God	.169	5.567	2.36		+
3. MID3 Deliberation/Cautiousness	.218	5.563	2.36		+
4. ID22 Commitment to Learning	.194	4.723	2.17		+
$R^2 = .334$ ; $R^2(\text{adj}) = .303$ ; $F = 10.77$ ; $P < .05$					

Table 84: Multiple Regression Results for MD4  
“Active Acculturation”

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. MID6 Persistence with Contextual Sensitivity	.465	21.687	4.66		+
2. ID31 Right Relationships/Concern for People	.219	8.986	3.00		+
3. ID9 Initiative	-.202	4.313	-2.08	R	+
4. ID37 Dealing with Spiritual Realities	-.181	4.228	-2.06		-
$R^2 = .301$ ; $R^2(\text{adj}) = .268$ ; $F = 9.26$ ; $P < .05$					

Table 85: Multiple Regression Results for ND1  
“Adjustment to Culture and Ministry”

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. ID21 Development of Interpersonal Skills	.367	10.716	3.27		+
2. MID3 Deliberation/Cautiousness	.308	7.219	2.69		+
3. ID26 Development of Confidence	-.280	6.106	-2.47	P	+
4. ID40 Godliness of Life before People	.215	4.285	2.07		+
$R^2 = .278$ ; $R^2(\text{adj}) = .235$ ; $F = 6.54$ ; $P < .05$					

“Table 86: Multiple Regression Results for ND2  
“Ministry Effectiveness”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	ID3	Positive Interpersonal Attitudes/Interaction	-.434	16.472	-4.06	P	+
2.	ID40	Godliness of Life before People <sup>136</sup>	-.245	6.146	-3.51		-
3.	MID1	Interpersonal Skills	-.275	6.436	-3.02		-
4.	ID29	Ability to Work Harmoniously with Others	.360	8.946	2.99		+
5.	ID33	Spirit-controlled Holy Life	-.262	12.287	-2.54		-
6.	MID2	Disciplined Confidence	-.230	5.030	-2.48		-
7.	ID12	Emotional Self-Control	-.210 <sup>+</sup>	4.430	-2.24		-
8.	ID31	Right Relationships/Concern for People	-.290	4.129	-2.10		-
			$R^2 = .367$ ; $R^2(\text{adj}) = .288$ ; $F = 4.64$ ; $P < .05$				

Table 87: Multiple Regression Results for ND3  
“Psychological Health”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	ID21	Development of Interpersonal Skills	-.366	10.728	-3.28	P	+
2.	ID35	Prayer-life	-.180	4.002	-2.00	P	+
			$R^2 = .186$ ; $R^2(\text{adj}) = .162$ ; $F = 7.98$ ; $P < .05$				

Table 88: Multiple Regression Results for ND4  
“Concern for Contextualizing Ministry”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	ID6	Confidence in Personal Skills and Judgement	.337	6.362	2.52		+
2.	ID15	Copability/Flexibility	-.344	5.231	-2.29	P	+
			$R^2 = .138$ ; $R^2(\text{adj}) = .114$ ; $F = 5.62$ ; $P < .05$				

Table 89: Multiple Regression Results for ND5  
“Adaptation to Cultural Patterns of Thinking/Communicating”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	MID6	Persistence with Contextual Sensitivity	.415	8.494	2.91		+
2.	ID17	Situational Sensitivity	-.287	5.199	-2.28	P	+
3.	ID28	Development of Knowledge, Skills, and Gifts	-.289	4.348	-2.09		-
			$R^2 = .195$ ; $R^2(\text{adj}) = .160$ ; $F = 5.56$ ; $P < .05$				

<sup>136</sup>All of these negative predictors should logically be positive. It is possible that the interaction of these factors in the regression resulted in negative effects and that exclusion of some of them might reverse the results. All have negative Pearson correlations but not high enough (i.e. -.21) to be considered significant enough to reverse.



Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. ID34 Dependence on God	.282	9.383	3.06	+	
2. MID5 Personal Life Maintenance	-.323	6.443	-2.54	-	
3. ID35 Prayer-Life	.234	5.551	2.36	+	
R <sup>2</sup> = .230; R <sup>2</sup> (adj)= .169; F=5.87; P=<.05					

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	➡
1. ID13 Prudence/Discretion	-.335	6.171	-2.48	P	+
2. MID2 Disciplined Confidence	-.276	4.723	-2.17	P	+
R <sup>2</sup> = .130; R <sup>2</sup> (adj)= .105; F=5.22; P=<.05					

Regression Step and Predictor		Coefficient	Partial-F	T-ratio	*	→
1.	MID1 Interpersonal Skills	-.380	7.410	-2.72	P	+
2.	ID31 Right Relationships/Concern for People	-.279	5.639	-2.37	P	+
3.	ID10 Perseverance/Diligence	-.311	5.298	-2.30	P	+
4.	ID20 Development of Communication Skills	.279	4.750	2.18		+
		R <sup>2</sup> = .255; R <sup>2</sup> (adj)= .211; F=5.82; P=<.05				

Regression Step and Predictor	Coefficient	Partial-F	T-ratio	*	→
1. ID25 Sense of Well-being with Life and Work	.513	21.875	4.68		+
2. ID5 Probity/Respect for Laws and Customs	.451	14.796	3.85		+
3. ID12 Emotional Self-Control	-.299	7.836	-2.80	P	+
4. ID16 Sociability	.296	5.643	2.38		+
5. ID19 Family Adaptation to Schooling Situation	.272	5.285	2.30		+
6. ID9 Initiative	-.239	4.743	-2.18	P	+

$R^2 = .426$ ;  $R^2(\text{adj}) = .374$ ;  $F = 8.18$ ;  $P < .05$

Table 94: Multiple Regression Results for ND10  
“Conflict Resolution Skills”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	ID5	Probity/Respect for Laws and Customs	-.368	9.176	-3.03	P	+
2.	ID25	Sense of Well-being with Life and Work	-.305	6.831	-2.61	P	+
3.	ID12	Emotional Self-Control	-.257	4.364	-2.15	P	+
4.	ID7	Self-Control and Confidence	-.257	6.831	-1.99		-
R <sup>2</sup> = .185; R <sup>2</sup> (adj)= .154; F=5.98; P=<.05							

Table 95: Multiple Regression Results for ND12  
“Adaptation to Cultural Life-Style”

Regression Step and Predictor			Coefficient	Partial-F	T-ratio	*	⇒
1.	ID14	Interpersonal Interest	.330	9.611	3.10		+
2.	ID21	Development of Interpersonal Skills	.274	5.866	2.42		+
3.	ID35	Prayer-life	.274	5.866	2.42		+
4.	ID17	Social Sensitivity	-.231	4.666	-2.16		-
5.	ID36	Maintenance of Spiritual Life	.213	4.223	2.06		+
R <sup>2</sup> = .259; R <sup>2</sup> (adj)= .204; F=4.69; P=<.05							

Appendix 10 summarizes the multiple regression results found in Tables 52 to 95. Each dependent variable was analysed against 46 independent variables, resulting in generally low R<sup>2</sup> scores,<sup>137</sup> indicating that these factors and their relationships are fairly complex. On the other hand, F-ratios ranged from adequate at 4.13 (the lowest) to very significant at 13.35 (the highest). The dependent variables that had the highest R<sup>2</sup> scores were: ND9 “Knowledge of Country and Language” (.426) and D23 “Identification with Cultural Personal and Interpersonal Values” (.403), followed by D7 “Adequate Social Interaction” (.386), MD2 “Research Investment in Ministry” (.383), ND2 “Ministry Effectiveness” (.367), MD3 “Adequate Ministry Education/Training” (.334), D14 “Understanding of History’s Influence on Culture” (.310), D13 “Understanding of Cultural Economic and Political Structure” (.305), and MD4 “Active Acculturation” (.301).

Three dependent factors had no loadings at all in the step-wise multiple regression: D25 “Identification with Social Role Values,” D27 “Enjoyment of National Recreational Activities,” and ND11 “Skills in Interpersonal Relationships.” One independent factor did not correlate in the regression to any dependent factor, ID32 “Mediators/Peace-Makers.” As Table 96 shows, the most significant overall positive predictors were ID25 “Sense of Well-being with Life and Work” and ID29 “Ability to Work Harmoniously with Others”

<sup>137</sup>R<sup>2</sup> identifies the percent of total variance accounted for by the variables which emerged.



Table 96: Multiple Regression Results  
Positive and Negative Predictors - Summary Chart

Indep. Vars.	Dependent Variables									Total <sup>138</sup>
ID1	D13	D14	D18							3
ID2	D16	D20								2
ID3	D2	D5	D20	ND2					D23	4/1
ID4	D8	D14	D20						D11	3/1
ID5	D17	ND9	ND10							3/0
ID6	D10	D23	ND4						D14	3/1
ID7								D13	ND10	0/2
ID8	D1	D19						D10	D11	2/2
ID9	D7	MD4	ND9						D22	3/1
ID10	ND8									1
ID11	D28									1
ID12	D23	ND9	ND10					D28	ND2	3/2
ID13	D13	D16	D19	ND7						4
ID14	D22	ND12								2
ID15	ND4									1
ID16	D3	ND9							D7	2/1
ID17	D7	D11	ND5				D24	D31	ND12	3/3
ID18	D1	D31								2
ID19	D7	D14	D23	ND9						4
ID20	D4	D12	D30	D31	ND8					5
ID21	D5	D19	D20	MD2	ND1	ND3	ND12	D7	D15	7/2
ID22	D3	D6	D21	D26	MD2	MD3		D7	D24	6/2
ID23								D17	D29	0/2
ID24	D2	D15							D17	2/1
ID25	D2	D3	D5	D24	D26	D29	ND9	ND10		8
ID26	D12	ND1						D9	D15	2/2
ID27	D11								D17	1/1
ID28	D9	D17	D22	MD1					ND5	4/1
ID29	D1	D2	D9	D14	D15	D19	D23	ND2		8
ID30	D14	D16								2
ID31	D7	D19	D26	D29	MD4	ND8			ND2	6/1
ID32										0
ID33									ND2	0/1
ID34	D8	D10	D13	D24	MD3	ND6				6
ID35	D4	D18	ND3	ND6	ND12					5
ID36	ND12								D15	1/1
ID37							D7	D19	MD4	0/3
ID38									D29	0/1
ID39	D30									1
ID40	D4	ND1							ND2	2/1
MID1	D22	D23	D24	MD2	ND8			D8	ND2	5/2
MID2	D6	D23	D24	D30	MD3	ND7			ND2	6/1
MID3	D6	D20	MD3	ND1						4
MID4	D4									1
MID5	MD2								ND6	1/1
MID6	D8	D22	MD4	ND5						4

<sup>138</sup>Positive predictors are indicated in bold type to the left of the chart; negative in italicized type to the right of the chart.

which correlated positively to 8 dependent variables each. The next best predictor was ID21 *“Development of Interpersonal Skills”* which related positively to 7 dependent factors and negatively to two. Four independent factors positively predicted 6 variables: ID22 *“Commitment to Learning,”* ID31, *“Right Relationships/Concern for People,”* ID34 *“Dependence on God,”* and MID2 *“Disciplined Confidence.”* Note that interpersonal skills and relationships come up three times out of the six.

### Extreme End Analysis

One of the objectives of this study is to develop a profile of individuals who are “competent” in intercultural living and ministry. To accomplish this, comparison needed to be made between those who, from the data, appeared to be most competent and those who appeared to be least competent, not only from their own self-analysis but also from colleague and national ratings. It is assumed that the “most competent” individuals were those with the highest scores on each factor while the “least competent” individuals were those with the lowest scores, depending on the wording of the questions (the variables) comprising each factor.<sup>139</sup> To do this comparative analysis two steps were undertaken. First, discriminant analysis (similar to step-wise regression but comparative between two groups) of all independent factors was undertaken against the top and bottom quartiles of each dependent factor. This step identifies predictors which are clarified by looking at only the “most competent” and “least competent” individuals. Secondly, profiles were developed of extreme groups on each dependent factor.

### Discriminant Analysis

Previous factor analysis had resulted in scores developed for each individual in terms of the loading of variables within each factor. These scores range in a continuum from high to low. Top and bottom quartiles were extracted by determining the frequencies for each dependent factor and retaining cumulative frequencies of 1-25 and of 75-100, excluding the rest. Then all independent factors were analyzed concurrently through discriminant analysis (Wilke’s Lambda method) against each dependent factor. Tables 97-143 show  $\eta^2$  for each quartile, a Wilke’s Lambda, a chi-square value, the degrees of freedom, and the P-value indicating the significance of all independent variables against the dependent variable. As well, a Centroid for each group is given indicating how far apart each group’s mean is from the overall mean as well as the orientation of each coefficient to the high or low group based on its positive or negative value.

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<sup>139</sup>For example, D7 “Adequate Social Interaction” loaded from one question in Section 6, Part 5, Question 1: “Do you feel lonely? The scale ranged from “hardly at all” to “completely.” Obviously, the ideal is “hardly at all” which is at the low end of the scale, requiring reversal of interpretation.



Then each independent variable which significantly discriminated between the extreme quartiles is listed with its standardized canonical discriminant function coefficient, Lambda ( $\lambda$ ), Partial-F (that is, the F-to-Remove, derived from the last step in the analytical process), and P-value. The higher the Coefficient and Partial-F, the greater its influence on other factors in the analysis. Correlated with the Coefficient and Partial-F, the lower the P-values, the greater the *significance* of the variable. The Partial-F (F-to-Remove) cut-off was set at 1.00. Anything below that was rejected.

Discriminant analysis requires careful interpretation of all independent factors (both those with positive as well as those with negative coefficients) in light of 1) the positive and negative orientations of the high and low centroids, 2) the way that the variable questions making up each factor were written, and 3) the significance of negative Pearson Product-Moment correlations of independent factors to each dependent factor. First, discriminant correlation is always positive or negative, that is, as one increases the other increases or as one increases the other decreases. Secondly, there may actually be a reversal in correlation to what the table shows because of the way that the questions (variables) comprising the factor were written.<sup>140</sup> Thirdly, there may be a reversal of correlation because of the complexity of the interrelationships of factors within the discriminant analysis, indicated by the Pearson Product-Moment correlations (as shown in Appendix 8).<sup>141</sup>

Because of the complexity involved in interpreting all these relationships two columns have been added to the following tables to clarify the predictor orientation. The column identified with a \* indicates what process was used to identify the predictor orientation. "R" indicates that the ways the variables were written in light of the title given to the factor requires the factor to be reversed. "P" indicates that the coefficient may be interpreted in reverse because it has a significant negative Pearson Product-Moment

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<sup>140</sup>For example, in ID2 "Tactfulness" all variables were actually written as the opposite, that is, of "frankness" (i.e. "Around others I never hesitate to say what I think" and "I prefer being frank over being tactful."). All of the variables in this factor had a mean less than 3.0 indicating that most missionaries preferred tactfulness to frankness. Because of the factor orientation, it would likely come up as a negative, which would be acceptable if the factor had been named "Frankness." However, in line with the title "Tactfulness" this predictor has to be reversed and read as a positive. [Perhaps all factors should have been titled in terms of their orientation rather than positively in terms of their theme. If so, the interpretation of regression analysis and discriminant analysis would not have been complicated in this way.]

<sup>141</sup>For example, in Table 98, ID29 "Ability to Work Harmoniously with Others" has a negative coefficient; however it has a negative Pearson correlation with adequate significance (-.218) indicating that the interactions of the variables push it toward a negative position when it would normally be positive. It may therefore be interpreted positively.

MID6 "Persistence with Contextual Sensitivity" has a negative coefficient; it also has a negative Pearson correlation and therefore may be interpreted as a positive predictor of D1 "Adjustment to Culture and Ministry."

Correlation.<sup>142</sup> When both reverse (R) and a significant Pearson correlation (P) are suggested, the direction has been reversed twice. The probable factor direction is indicated in the column identified by an arrow (⇒).

Finally, in looking for predictors of each dependent factor, the independent factor direction (⇒) must be correlated with the positive or negative orientation of the high centroid (the “most competent” group). If the high centroid is positive all + orientations are positive; if it is negative all - orientations are positively predictive of the “most competent” group.

Table 97: Discriminant Analysis Results for D1  
“Adjustment to Culture and Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	2.326	-2.225	.1558	63.208	18	.0000

Independent (Predictor) Factors <sup>143</sup>		Coefficient	Partial-F	$\lambda$	P-Value	*	⇒
1.	ID31 Right Relationships/Concern for People	1.614	31.441	.521	.0001		+
2.	ID9 Initiative	1.466	23.851	.323	.0000	R	-
3.	ID18 Empathy	1.263	21.783	.741	.0004		+
4.	MID2 Disciplined Confidence	1.177	17.666	.654	.0001		+
5.	ID40 Godliness of Life Before People	1.174	14.397	.255	.0000		+
6.	MID6 Persistence with Contextual Sensitivity	-1.144	17.435	.282	.0000		-
7.	ID32 Mediation/Peace-making	1.033	14.397	.347	.0000		+
8.	ID39 Dependence on the Holy Spirit	.997	11.928	.405	.0000		+
9.	ID33 Spirit-controlled Holy Life	.908	10.569	.198	.0000		+
10.	ID37 Dealing with Spiritual Realities	.807	8.012	.226	.0000		+
11.	ID25 Sense of Well-being with Life and Work	.697	5.784	.480	.0001		+
12.	ID15 Copability/Flexibility	-.643	7.565	.587	.0001		-
13.	ID16 Sociability	.609	3.933	.191	.0000		+
14.	ID30 Capacity to Research and Strategize	-.472	2.156	.162	.0000		-
15.	ID10 Perseverance/Diligence	.359	1.361	.171	.0000		+
16.	ID19 Family Adaptation to Schooling Situation	.443	2.924	.441	.0000		+
17.	ID23 Commitment to Personal Intel. Develop.	.289	1.010	.156	.0000		+
18.	ID36 Maintenance of Spiritual Life	-.425	2.586	.183	.0000		-

<sup>142</sup>A Pearson correlation of -.21 is significant enough (p<0.05) to require a reversal of the coefficient sign. It was determined that  $|r|>.21$  (significant at 0.05) by using the following formula (sample n=91):  $2 = \sqrt{F(rR(89),R(1-r^2))}$

<sup>143</sup>Discriminant analysis of independent factors with the dependent factor D1 resulted in 4 negative predictors. Reversal and Pearson correlations change this to seven negative predictors.



Table 98: Discriminant Analysis Results for D2  
“Physical and Psychological Health”

High N		Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23		23	-3.399	3.399	.077	78.416	27	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	***➔
1.	ID3	Positive Interpersonal Attitudes/Interaction	4.087	132.250	.859	.0102	P/R	+
2.	MID6	Persistence with Contextual Sensitivity	3.465	64.648	.752	.0022		+
3.	ID1	Positive Marital/Family Relationships	-3.139	40.279	.336	.0001		-
4.	ID28	Development of Knowledge, Skills, Gifts	-2.717	38.570	.319	.0002		-
5.	ID10	Perseverance/Diligence	2.618	40.487	.431	.0001		+
6.	ID32	Mediation/Peace-making	2.414	24.592	.158	.0001		+
7.	ID29	Ability to Work Harmoniously with Others	-2.282	20.300	.116	.0001	P	+
8.	ID26	Development of Confidence	2.048	18.037	.302	.0002		-
9.	ID21	Development of Interpersonal Skills	1.950	15.265	.268	.0002		+
10.	ID39	Dependence on the Holy Spirit	1.856	22.305	.126	.0001		+
11.	MID2	Disciplined Confidence	1.841	25.905	.616	.0004		+
12.	ID36	Maintenance of Spiritual Life	-1.778	31.135	.515	.0001		-
13.	ID20	Development of Communication Skills	1.543	10.621	.299	.0003		+
14.	ID18	Empathy	1.400	17.640	.169	.0000		+
15.	ID40	Godliness of Life before People	1.287	12.344	.081	.0002		+
16.	ID8	Risk-taking/Openness to People and Exper.	-1.261	13.242	.247	.0001	R	+
17.	ID13	Prudence/Discretion	-1.175	10.334	.220	.0001		-
18.	ID24	Language Learning Development	-1.120	11.386	.663	.0006		-
19.	ID33	Spirit-Controlled Holy Life	-.919	4.918	.092	.0002		-
20.	ID14	Interpersonal Interest	.876	6.031	.079	.0001		+
21.	ID22	Commitment to Learning	.869	5.312	.250	.0002		+
22.	ID38	Spiritual Gifting for Ministry	.686	3.393	.073	.0000		+
23.	ID25	Sense of Well-Being with Life and Work	.607	2.062	.107	.0002		+
24.	ID7	Self-control and Confidence	.505	1.945	.485	.0001		+
25.	ID2	Tactfulness	-.492	2.915	.133	.0001	R	+
26.	ID15	Copability/Flexibility	-.448	2.267	.074	.0001		-

Table 99: Discriminant Analysis Results for D3  
“Satisfaction with Ministry Development/Progress”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	1.645	-1.645	.2612	48.329	16	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID20 Development of Communication Skills	1.314	20.538	.611	.0004		+
2.	ID36 Maintenance of Spiritual Life	-1.258	21.598	.666	.0006		-
3.	ID32 Mediation/Peace-Making	1.070	15.617	.565	.0003		+
4.	ID22 Commitment to Learning	-1.034	18.538	.755	.0024	P	+
5.	ID29 Ability to Work Harmoniously with Others	-.955	11.087	.454	.0001		-
6.	ID16 Sociability	-.789	13.927	.877	.0170	P	+
7.	ID12 Emotional/Verbal Self-Control	.767	9.577	.484	.0001	R	-
8.	ID7 Self-Control and Confidence	.751	8.610	.521	.0001		+
9.	ID34 Dependence on God	-.740	8.779	.428	.0001		-
10.	ID15 Copability/Flexibility	-.544	4.221	.393	.0001		-
11.	ID3 Positive Interpersonal Attitudes/Interaction	.515	4.570	.340	.0001	R	+
12.	MID4 Self-Controlled Tactfulness	.432	3.210	.293	.0001	R	-
13.	ID23 Commitment to Personal Intellect. Develop.	.416	3.148	.314	.0001		+
14.	MID6 Persistence with Contextual Sensitivity	.298	1.290	.261	.0001		+

Table 100: Discriminant Analysis Results for D4  
“Interpersonal Interaction with Nationals”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	-1.999	1.912	.2001	54.711	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID35 Prayer Life	-1.314	22.193	.774	.0046		-
2.	ID21 Development of Interpersonal Skills	1.050	17.382	.698	.0019		+
3.	MID4 Deliberation/Cautiousness	1.035	18.662	.863	.0123	P/R	+
4.	ID32 Mediation/Peace-making	.993	11.796	.646	.0013		+
5.	ID27 Changes in Political Opinions	.966	8.898	.456	.0004		+
6.	ID3 Positive Interpersonal Attitudes/Interaction	.958	9.811	.576	.0012	R	-
7.	ID22 Commitment to Learning	-.942	8.729	.511	.0010		-
8.	ID9 Initiative	.940	10.506	.482	.0010	R	-
9.	ID25 Sense of Well-being with Life and Work	.924	9.066	.356	.0001		+
10.	ID12 Emotional Self-Control	.803	10.306	.541	.0011	R	-



Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
11. ID10	Perseverance/Diligence	.684	6.133	.241	.0000		+
12. ID23	Commitment to Personal Intellectual Develop.	.674	6.368	.401	.0002		+
13. ID37	Dealing with Spiritual Realities	.527	4.513	.291	.0000		+
14. ID40	Godliness of Life Before People	.532	3.396	.217	.0000		+
15. ID19	Family Adaptation to Schooling Situation	-.467	3.167	.227	.0001		-
16. ID4	Analytical Perceptiveness/Curiosity	.456	2.153	.200	.0000		+
17. ID29	Ability to Work Harmoniously with Others	.335	1.177	.254	.0000		+
18. ID11	Persistence	.390	2.594	.320	.0000	R	-

Table 101: Discriminant Analysis Results for D5  
“Satisfaction with and Commitment to Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	2.24535	-2.35682	.1524	63.955	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID7	Self-Control and Confidence	2.051	43.482	.538	.0001		+
2. ID35	Prayer-life	1.812	35.132	.638	.0010		+
3. ID31	Right Relationships/Concern for People	1.716	37.049	.786	.0064		+
4. ID24	Language Learning Development	-1.347	21.488	.298	.0000		-
5. ID25	Sense of Well-being with Life and Work	1.505	25.010	.379	.0000		+
6. ID34	Dependence on God	-1.260	23.529	.281	.0000		-
7. ID1	Positive Marital/Family Relate	1.163	14.243	.720	.0035		+
8. ID3	Positive Interpersonal Attitudes/Interactions	-.949	15.794	.860	.0115	P/R	-
9. MID2	Disciplined Confidence	.945	12.289	.263	.0000		+
10. ID2	Tactfulness	.930	9.316	.410	.0000	R	-
11. MID4	Self-Controlled Tactfulness	.833	7.628	.436	.0000	R	-
12. MID3	Deliberation/Cautiousness	-.811	8.376	.245	.0000		-
13. ID8	Risk-taking/Openness to People/Experiences	.693	5.830	.161	.0000	R	-
14. ID27	Changes in Political Opinions	.621	4.253	.224	.0000		+
15. MID1	Interpersonal Skills	-.539	4.737	.178	.0000		-
16. ID9	Initiative	.584	3.728	.143	.0000	R	-
17. ID21	Development of Interpersonal Skills	.467	2.680	.150	.0000		+
18. ID6	Confidence in Personal Skills and Judgement	.299	1.312	.168	.0000		+

Table 102: Discriminant Analysis Results for D6  
“Satisfaction with Social Interaction”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	-2.180	2.180	.1675	58.062	23	.0001

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID25 Sense of Well-Being with Life and Work	-2.062	28.060	.391	.0010		-
2.	ID39 Dependence on the Holy Spirit	2.046	19.405	.304	.0004		+
3.	ID28 Development of Knowledge, Skills,&Gifts	1.915	36.235	.743	.0056		+
4.	MID2 Disciplined Confidence	1.723	33.034	.879	.0176	P	-
5.	ID3 Positive Interpersonal Attitudes/Interaction	1.484	21.835	.318	.0003	R	-
6.	ID20 Development of Communication Skills	-1.460	14.721	.377	.0006		-
7.	MID6 Persistence with Contextual Sensitivity	-1.335	12.352	.273	.0003		-
8.	ID23 Commitment to Personal Intellect. Develop.	1.233	12.151	.510	.0008		+
9.	ID17 Situational Sensitivity	-1.226	11.848	.283	.0004	R	+
10.	ID33 Spirit-Controlled Holy Life	1.231	11.406	.408	.0008		+
11.	ID36 Maintenance of Spiritual Life	1.079	10.494	.453	.0007		+
12.	ID16 Sociability	-1.072	10.491	.356	.0006		-
13.	ID10 Perseverance/Diligence	-.956	9.926	.552	.0011		-
14.	ID31 Right Relationships/Concern for People	.945	6.359	.235	.0001		+
15.	ID9 Initiative	.724	4.429	.218	.0001	R	-
16.	ID11 Persistence	-.715	5.174	.623	.0015	R	+
17.	ID24 Language Learning Development	-.661	3.570	.255	.0001		-
18.	ID19 Family Adaptation to Schooling Situation	-.653	3.515	.191	.0002		-
19.	ID35 Prayer-Life	-.610	3.044	.257	.0003		-
20.	ID6 Confidence in Personal Skills and Judgement	.582	3.349	.582	.0012		+
21.	ID18 Empathy	.499	2.701	.175	.0002		+
22.	ID8 Risk-taking/Openness to People & Exper.	.468	2.777	.205	.0001	R	-
23.	ID30 Capacity to Research and Strategize	-.334	1.026	.168	.0003		-



Table 103: Discriminant Analysis Results for D7  
“Adequate Social Interaction”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	22	-28.82134	28.82134	.0011	159.093	37	.0000

Independent (Predictor) Factors <sup>144</sup>		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID6 Confidence in Personal Skills & Judgement	-30.243	629.950	.284	.0002		-
2.	ID9 Initiative	25.958	367.000	.546	.0002	R	-
3.	ID2 Tactfulness	-21.298	196.600	.050	.0000	R	+
4.	ID11 Persistence	18.955	354.760	.369	.0002	R	-
5.	MID3 Deliberation/Cautiousness	18.237	266.700	.150	.0000		+
6.	MID2 Disciplined Confidence	16.476	207.430	.093	.0000		+
7.	ID23 Commitment to Personal Intellect. Growth	15.146	257.050	.080	.0000		+
8.	ID15 Copability/Flexibility	14.505	146.100	.045	.0000		+
9.	ID7 Self-control and Confidence	14.095	156.870	.204	.0000		+
10.	MID6 Persistence with Contextual Sensitivity	14.016	98.132	.023	.0000		+
11.	ID1 Positive Marital/Family Relationships	-13.773	154.050	.345	.0002		-
12.	ID8 Risk-taking/Openness to People & Exper.	12.224	79.706	.196	.0000	R	-
13.	ID40 Godliness of life before People	-11.902	54.305	.262	.0002		-
14.	ID35 Prayer-life	-11.724	120.250	.223	.0001		-
15.	ID10 Perseverance	-10.999	57.807	.304	.0002		-
16.	ID31 Right Relationships/Concern for People	10.915	69.559	.609	.0005		+
17.	ID32 Mediation/Peace-Making	-10.352	110.540	.362	.0001		-
18.	ID27 Changes in Political Opinions	-10.305	80.645	.117	.0000		-
19.	ID24 Language Learning Development	9.632	92.187	.027	.0000		+
20.	ID37 Dealing with Spiritual Realities	-8.922	22.898	.431	.0001		-
21.	ID20 Development of Communication Skills	8.499	92.849	.508	.0002		+
22.	ID19 Family Adaptation to Schooling Situation	8.059	122.13	.406	.0001		+
23.	ID5 Probity/Respect for Laws and Customs	7.304	39.735	.127	.0000	R	-
24.	ID38 Spiritual Gifting for Ministry	-6.364	60.867	.068	.0000		-
25.	ID16 Sociability	-6.303	53.917	.773	.0055		+
26.	ID17 Situational Sensitivity	6.299	39.800	.016	.0000	P/R	+

<sup>144</sup>The Partial-F is so high on the first variables in the list that there is very likely some confounding effect at work. When ID6 is removed from the equation, negative variables ID2, ID27, ID38, ID18, ID3, and ID4 are removed also. ID10 and ID22 become positive. ID40, ID35, ID32, and ID37 have low means and therefore negative orientation, which together with a repeat negative in discriminant analysis results in positive prediction. ID16 and ID36 remain negative.

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
27. MID1	Interpersonal Skills	5.788	28.469	.008	.0000		+
28. ID29	Ability to Work Harmoniously with Others	4.744	12.347	.004	.0000		+
29. ID21	Development of Interpersonal Skills	4.315	10.853	.003	.0000	P	-
30. ID22	Commitment to Learning	-4.072	7.255	.690	.0018	P	+
31. ID36	Maintenance of Spiritual Life	-3.867	18.519	.103	.0000		-
32. ID26	Development of Confidence	3.672	21.432	.010	.0000		+
33. ID12	Emotional Self-Control	3.114	15.844	.031	.0000	R	-
34. ID18	Empathy	-1.909	6.927	.002	.0000		-
35. ID3	Positive Interpersonal Attitudes/Interaction	-1.342	3.068	.001	.0000	R	+
36. ID4	Analytical Perceptiveness/Curiosity	-1.336	1.850	.005	.0000		-
37. MID4	Self-Controlled Tactfulness	3.380	3.706	.161	.0000	R	-

Table 104: Discriminant Analysis Results for D8  
“Commitment to Learning Culture and Country”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	21	1.89898	-2.07984	.1946	54.826	17	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID8	Risk-taking/Openness to People&Experiences	1.650	29.856	.615	.0006	R	-
2. ID23	Commitment to Personal Intellect. Develop.	-1.381	19.478	.493	.0001		-
3. ID3	Positive Interpersonal Attitudes/Interaction	1.349	20.269	.445	.0001	R	-
4. ID27	Changes in Political Opinions	1.220	25.205	.881	.0216		+
5. ID28	Development of Knowledge, Skills, Gifts	1.002	14.411	.544	.0002		+
6. MID3	Deliberation/Cautiousness	-.938	9.374	.304	.0000		-
7. ID32	Mediation/Peace-making	-.906	12.498	.408	.0000		-
8. ID22	Commitment to Learning	-.796	11.480	.680	.0013	P	+
9. ID9	Initiative	.701	6.862	.254	.0000	R	-
10. MID1	Interpersonal Skills	-.745	10.320	.762	.0038		-
11. ID19	Family Adaptation to Schooling Situation	-.553	3.743	.274	.0000		-
12. ID2	Tactfulness	.419	2.115	.373	.0000	R	-
13. ID11	Persistence	.418	2.075	.237	.0000	R	-
14. ID1	Positive Marital/Family Relationships	-.451	2.470	.220	.0000		-
15. ID15	Copability/Flexibility	.393	2.519	.207	.0000		+
16. ID6	Confidence in Personal Skills and Judgement	.348	1.964	.333	.0000		+
17. MID4	Self-Controlled Tactfulness	.342	1.693	.195	.0000	R	-



Table 105: Discriminant Analysis Results for D9<sup>145</sup>  
“Factual Knowledge of Economic and Political Structures”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	22	2.009	-2.008	.1913	54.557	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID29 Ability to Work Harmoniously with Others	1.252	17.750	.836	.0065		+
2.	ID17 Situational Sensitivity	1.180	18.949	.649	.0006	R	-
3.	ID4 Analytical Perceptiveness/Curiosity	.952	12.145	.527	.0001		+
4.	ID22 Commitment to Learning	.901	11.496	.418	.0000		+
5.	ID16 Sociability	.893	6.331	.721	.0012		+
6.	MID5 Personal Life Maintenance	-.807	7.499	.338	.0000		-
7.	ID28 Development of Knowledge, Skills, Gifts	.662	5.586	.389	.0000		+
8.	ID2 Tactfulness	-.599	5.161	.226	.0000	R	+
9.	ID9 Initiative	.579	4.028	.310	.0000	R	-
10.	ID5 Probity/Respect for Laws and Customs	.561	4.110	.255	.0000	R	-
11.	ID27 Changes in Political Opinions	.434	2.334	.479	.0000		+
12.	MID3 Deliberation/Cautiousness	.408	2.150	.217	.0000		+
13.	ID18 Empathy	.395	2.360	.272	.0000		+
14.	ID10 Perseverance/Diligence	-.346	1.468	.191	.0000		-

Table 106: Discriminant Analysis Results for D10<sup>146</sup>  
“Factual Knowledge of Belief Structures”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	-1.643	1.717	.2530	48.103	16	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID6 Confidence in Personal Skills and Judgement	.862	11.958	.847	.0078	P	-
2.	ID12 Emotional Self-Control	.835	10.630	.624	.0007	R	-
3.	MID4 Self-Controlled Tactfulness	.736	6.986	.355	.0001	R	-
4.	MID5 Personal Life Maintenance	-.736	7.984	.496	.0005		-
5.	ID15 Copability/Flexibility	.733	7.456	.576	.0005		+
6.	ID11 Persistence	-.661	6.428	.422	.0001	R	+

<sup>145</sup>Four variables related to spiritual dynamics were also identified with D9: ID33 (.580), ID36 (.508), ID38 (-.460), and ID39 (-.676).

<sup>146</sup>Three variables related to spiritual dynamics were also identified with D10: ID33 (.792), ID34 (-.397), and ID35 (.730).

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
7.	MID3 Deliberation/Cautiousness	-.625	5.257	.453	.0002		-
8.	ID2 Tactfulness	.612	5.573	.389	.0001	R	-
9.	ID20 Development of Communication Skills	.448	2.484	.316	.0000	P	-
10.	MID6 Persistence with Contextual Sensitivity	-.437	3.133	.752	.0025		-
11.	MID1 Interpersonal Skills	.328	1.864	.296	.0000		+
12.	ID16 Sociability	.327	1.777	.264	.0001		+
13.	ID26 Development of Confidence	-.272	1.200	.253	.0001		-

Table 107: Discriminant Analysis Results for D11<sup>147</sup>  
“Factual Knowledge of Sociological Structures”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	-12.129	12.129	.0065	131.097	36	.0000

Independent (Predictor) Factors <sup>148</sup>		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID4 Analytical Perceptiveness/Curiosity	-14.531	453.010	.870	.0140		-
2.	ID26 Development of Confidence	-11.674	127.840	.109	.0000		-
3.	ID27 Changes in Political Opinions	11.444	213.200	.590	.0015		+
4.	MID4 Self-Controlled Tactfulness	11.206	181.640	.533	.0006	R	-

<sup>147</sup>Eight variables related to spiritual dynamics were also identified with D11: ID31 (1.128), ID32 (8.966), ID33 (8.502), ID34 (-5.380), ID35 (7.996), ID36 (3.390), ID39 (12.306), and ID40 (6.311).

<sup>148</sup>ID4 has more than twice the Partial-F value as the next highest variable (ID27) and is so dominant that when removed from the equation, it changes the picture entirely, reducing the number of correlating variables to 10 (most of them new): ID2, ID5, ID9, ID14, ID26, ID29, ID33, ID38, ID40, and MID1. Two negative variables are made positive (ID 26 and MID1) while all the rest are deleted. It is clear that the negative values in this table are a result of the confounding effects of ID4. Following are the results with ID4 removed. Note that most variables become positive predictors of the high group.

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	.864	-.864	.5619	22.483	10	.0128

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID9 Initiative	-.886	8.292	.717	.0340	R	+
2.	ID33 Spirit-Controlled Holy Life	.830	7.927	.559	.0389		+
3.	ID38 Spiritual Gifting for Ministry	.788	7.342	.606	.0352		+
4.	MID1 Interpersonal Skills	.635	5.428	.864	.0437		+
5.	ID40 Godliness of Life Before People	.577	4.175	.559	.0389		+
6.	ID2 Tactfulness	.486	3.319	.915	.0487	R	-
7.	ID29 Ability to Work Harmoniously with Others	-.473	2.360	.572	.0172		-
8.	ID5 Probity/Respect for Laws and Customs	-.450	2.519	.652	.0300	R	+
9.	ID26 Development of Confidence	.449	2.234	.687	.0344		+
10.	ID14 Interpersonal Interest	.332	1.212	.562	.0136		+



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
5. ID6	Confidence in Personal Skills and Judgement		8.771	165.180	.462	.0002	P	-
6. MID1	Interpersonal Skills		-6.115	88.485	.731	.0040		-
7. MID2	Disciplined Confidence		-5.894	108.450	.075	.0000		-
8. ID7	Self-control and Confidence		-5.865	42.984	.044	.0000		-
9. ID28	Development of Knowledge, Skills, Gifts		5.519	54.089	.129	.0000		+
10. ID10	Perseverance/Diligence		5.318	44.876	.306	.0000		+
11. ID13	Prudence/Discretion		-4.984	44.275	.391	.0001		-
12. ID24	Language Learning Development		-4.454	22.117	.027	.0000		-
13. ID3	Positive Interpersonal Attitudes/Interaction		-4.053	32.325	.054	.0000	R	+
14. ID12	Emotional Self-Control		-3.898	29.373	.058	.0000	R	+
15. MID5	Personal Life Maintenance		3.843	34.529	.019	.0000		+
16. ID8	Risk-taking/Openness to People&Experienc.		-3.209	24.274	.626	.0016	R	+
17. ID15	Copability/Flexibility		-2.859	27.522	.138	.0000		-
18. MID3	Deliberation/Cautiousness		2.680	18.798	.199	.0000		+
19. ID17	Situational Sensitivity		2.655	26.254	.499	.0002	R	-
20. ID30	Capacity to Research and Strategize		2.345	6.415	.009	.0000		+
21. ID23	Commitment to Personal Intellect. Develop.		-2.212	10.308	.011	.0000		-
22. ID18	Empathy		-2.084	11.054	.030	.0000		-
23. ID21	Development of Interpersonal Skills		1.639	4.564	.372	.0001		+
24. ID2	Tactfulness		1.434	6.840	.774	.0040	R	-
25. ID25	Sense of Well-Being with Life and Work		-1.341	4.241	.337	.0001		-
26. ID19	Family Adaptation to Schooling Situation		1.194	3.771	.036	.0000		+
27. ID31	Right Relationships/Concern for People		1.128	1.818	.007	.0000		+
28. MID6	Persistence with Contextual Sensitivity		1.025	2.55	.102	.0000		+
29. ID16	Sociability		-.550	1.027	.006	.0000		-

Table 108: Discriminant Analysis Results for D12<sup>149</sup>  
“Understanding of Cultural Ethos and Social Structure”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	3.986	-4.167	.0544	84.432	28	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1. ID3	Positive Interpersonal Attitudes/Interaction		-2.249	28.584	.157	.0000	R	+

<sup>149</sup>Two variables related to spiritual dynamics were also identified with D12: ID32 Mediation/Peace-Making (-1.183) and ID39 Dependence on the Holy Spirit (.463).

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
2.	ID2	Tactfulness	2.246	27.480	.875	.0170	R	-
3.	ID19	Family Adaptation to Schooling Situation	-2.099	16.062	.666	.0008		-
4.	ID20	Development of Communication Skills	1.991	25.147	.397	.0001		+
5.	ID26	Development of Confidence	1.909	17.160	.262	.0000		+
6.	ID5	Probity/Respect for Laws and Customs	-1.875	21.225	.211	.0000	R	+
7.	ID1	Positive Marital/Family Relationships	-1.802	15.989	.432	.0001	R	+
8.	MID1	Interpersonal Skills	1.572	15.424	.128	.0000		+
9.	ID30	Capacity to Research and Strategize	-1.482	8.712	.513	.0002		-
10.	ID13	Prudence/Discretion	1.460	13.690	.148	.0000		+
11.	ID24	Language Learning Development	-1.334	5.935	.148	.0000		-
12.	ID14	Interpersonal Interest	1.283	13.343	.200	.0000		+
13.	MID2	Disciplined Confidence	-1.138	7.622	.091	.0000		-
14.	ID25	Sense of Well-Being with Life and Work	1.063	3.659	.359	.0000		+
15.	ID23	Commitment to Personal Intellectual Develop.	.999	5.171	.222	.0000		+
16.	ID6	Confidence in Personal Skills and Judgement	.987	8.321	.099	.0000		+
17.	MID3	Deliberation/Cautiousness	.974	2.925	.060	.0000		+
18.	ID21	Development of Interpersonal Skills	.952	5.780	.588	.0002		+
19.	ID18	Empathy	.835	3.695	.756	.0028		+
20.	ID12	Emotional Self-Control	.823	4.233	.074	.0000	R	-
21.	ID7	Self-control and Confidence	-.809	4.055	.318	.0000		-
22.	MID6	Persistence with Contextual Sensitivity	.764	4.319	.336	.0000		+
23.	ID15	Copability/Flexibility	.616	3.528	.066	.0000		+
24.	ID27	Changes in Political Opinions	-.573	1.785	.054	.0000		-

Table 109: Discriminant Analysis Results for D13<sup>150</sup>  
“Understanding of Cultural Economic and Political Structure”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	-1.523	1.592	.2826	44.227	16	.0002

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID14	Interpersonal Interest	1.257	23.846	.724	.0038	P	-
2.	ID5	Probity/Respect for Laws and Customs	-1.201	12.196	.308	.0004	R	+

<sup>150</sup>Five variables related to spiritual dynamics were also identified with D13: ID31 Right Relationships/Concern for People (.685), ID32 Mediation/Peace-Making (-.643), ID33 Spirit-Controlled Holy Life (.422), ID36 Maintenance of Spiritual Life (.538), and ID38 Spiritual Gifting for Ministry (-.415).



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
3.	ID31	Right Relationships/Concern for People	-1.088	19.178	.551	.0014		-
4.	ID21	Development of Interpersonal Skills	.880	8.036	.333	.0009		+
5.	ID1	Positive Marital/Family Relationships	-.834	12.107	.781	.0056		-
6.	ID26	Development of Confidence	.821	8.163	.637	.0027		+
7.	ID24	Language Learning Development	.668	5.711	.374	.0008		+
8.	ID18	Empathy	-.651	4.969	.291	.0004		-
9.	MID5	Personal Life Maintenance	.511	2.969	.513	.0005		+
10.	ID30	Capacity to Research and Strategize	-.456	2.439	.280	.0006		-
11.	ID10	Perseverance/Diligence	.391	2.417	.453	.0004		+
12.	ID11	Persistence	.307	1.088	.283	.0003	R	-

Table 110: Discriminant Analysis Results for D14<sup>151</sup>  
“Understanding of History’s Influence on Culture”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	22	-1.632	1.632	.2639	45.289	16	.0001

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	MID1	Interpersonal Skills	1.506	16.955	.525	.0001		+
2.	MID4	Self-Controlled Tactfulness	1.289	21.046	.569	.0002	R	-
3.	ID30	Capacity to Research and Strategize	-1.105	11.515	.491	.0001		-
4.	ID4	Analytical Perceptiveness/Curiosity	-.960	12.732	.749	.0005		-
5.	ID25	Sense of Well-Being with Life and Work	.735	6.189	.419	.0001		+
6.	ID28	Development of Knowledge, Skills, Gifts	-.702	5.885	.348	.0001		-
7.	ID22	Commitment to Learning	.654	7.387	.660	.0002	P	-
8.	ID29	Ability to Work Harmoniously with Others	-.471	2.719	.387	.0001		-
9.	ID13	Prudence/Discretion	-.387	2.003	.612	.0002		-
10.	ID17	Situational Sensitivity	-.372	1.892	.268	.0002	R	+
11.	MID2	Disciplined Confidence	-.344	1.676	.278	.0002		-
12.	ID14	Interpersonal Interest	-.296	1.176	.264	.0002		-

<sup>151</sup>Four variables related to spiritual dynamics were also identified with D14: ID35 Prayer-Life (.644), ID36 Maintenance of Spiritual Life (.476), ID38 Spiritual Gifting for Ministry (.780), and ID39 Dependence on the Holy Spirit (.821).

Table 111: Discriminant Analysis Results for D15<sup>152</sup>  
“Insight into the Culture’s Personality”

High N		Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22		22	5.832	-5.832	.0273	100.824	28	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID9 Initiative	3.529	49.976	.165	.0000	R	-
2.	ID24 Language Learning Development	3.158	61.583	.189	.0000		+
3.	ID25 Sense of Well-Being with Life and Work	2.995	37.801	.669	.0010		+
4.	ID6 Confidence in Personal Skills and Judgement	-2.803	69.612	.208	.0000		-
5.	MID4 Self-Controlled Tactfulness	-2.673	62.744	.355	.0000	R	+
6.	ID20 Development of Communication Skills	2.462	33.515	.331	.0000		+
7.	ID29 Ability to Work Harmoniously with Others	2.433	24.819	.059	.0000		+
8.	ID23 Commitment to Personal Intellectual Develop.	2.416	31.549	.227	.0000		+
9.	MID1 Interpersonal Skills	-2.214	25.459	.200	.0000		-
10.	ID4 Analytical Perceptiveness/Curiosity	2.190	26.240	.571	.0002		+
11.	ID2 Tactfulness	-2.023	26.779	.121	.0000	R	+
12.	ID3 Positive Interpersonal Attitudes/Interaction	-1.928	19.376	.098	.0000	R	+
13.	ID21 Development of Interpersonal Skills	-1.540	17.327	.073	.0000		-
14.	ID1 Positive Marital/Family Relationships	-1.463	16.678	.052	.0000		-
15.	ID28 Development of Knowledge, Skills, Gifts	-1.336	6.184	.428	.0000		-
16.	ID15 Copability/Flexibility	1.289	8.162	.046	.0000		+
17.	ID7 Self-control and Confidence	-1.280	7.901	.113	.0000		-
18.	ID16 Sociability	1.253	10.838	.301	.0000		+
19.	ID26 Development of Confidence	-1.037	4.447	.068	.0000		-
20.	ID11 Persistence	.910	7.462	.041	.0000	R	-
21.	ID30 Capacity to Research and Strategize	-.892	4.781	.089	.0000		-
22.	ID14 Interpersonal Interest	-.779	3.878	.034	.0000		-
23.	MID2 Disciplined Confidence	-.573	2.123	.031	.0000		-
24.	MID6 Persistence with Contextual Sensitivity	-.350	1.143	.027	.0000		-

<sup>152</sup>Four variables related to spiritual dynamics were also identified with D15: ID32 Mediation/Peace-Making (.580), ID35 Prayer-Life (.556), ID36 Maintenance of Spiritual Life (-1.683), and ID40 Godliness of Life Before People (-.590).



Table 112: Discriminant Analysis Results for D16<sup>153</sup>  
“Insight into Communicating through Accepted Structures”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	1.345	-1.286	.3559	36.672	15	.0014

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID25 Sense of Well-Being with Life and Work	1.597	18.020	.699	.0019		+
2.	ID2 Tactfulness	.920	14.639	.848	.0081	R	-
3.	MID5 Personal Life Maintenance	.788	7.430	.646	.0013		+
4.	ID23 Commitment to Personal Intellectual Develop.	.786	7.367	.755	.0028		+
5.	ID9 Initiative	.714	4.975	.566	.0009	R	-
6.	ID20 Development of Communication Skills	.625	3.361	.458	.0011		+
7.	ID17 Situational Sensitivity	-.565	4.991	.536	.0009	R	+
8.	ID21 Development of Interpersonal Skills	-.474	3.059	.427	.0009		-
9.	ID12 Emotional Self-Control	-.457	2.556	.371	.0015	R	+
10.	ID16 Sociability	.437	2.220	.392	.0014		+
11.	ID22 Commitment to Learning	-.391	2.120	.508	.0010		-
12.	ID7 Self-control and Confidence	.352	1.228	.356	.0019		+
13.	MID3 Deliberation/Cautiousness .	-.342	1.834	.484	.0011		-
14.	ID15 Copability/Flexibility	.295	1.406	.409	.0011		+

Table 113: Discriminant Analysis Results for D17<sup>154</sup>  
“Insight into Cultural Values/Beliefs”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
21	22	-17.799	16.990	.0031	144.064	32	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	Lambda	P-Value	
1.	ID24	Language Learning Development	29.317	896.340	.629	.0004	+
2.	ID7	Self-control and Confidence	15.151	319.870	.031	.0000	+
3.	ID22	Commitment to Learning	-14.258	347.040	.126	.0000	-
4.	ID28	Development of Knowledge, Skills, Gifts	-13.722	339.390	.493	.0000	-
5.	ID3	Positive Interpersonal Attitudes/Interaction	-12.594	295.800	.083	.0000	R +
6.	ID18	Empathy	-10.756	175.050	.133	.0000	-

<sup>153</sup>One variable not included in the table related to spiritual dynamics was ID37 Dealing with Spiritual Realities (.317).

<sup>154</sup>Five “spiritual dynamics” variables also identified with D17: ID36 Maintenance of Spiritual Life (9.770), ID38 Spiritual Gifting for Ministry (-4.406), ID34 Dependence on God (3.713), ID35 Prayer-Life (-2.318) and ID33 Spirit-Controlled Holy Life (-1.150).

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
7.	ID12	Emotional Self-Control	-10.467	161.400	.355	.0000	R	+
8.	MID4	Self-Controlled Tactfulness	10.035	165.790	.095	.0000	R	+
9.	ID23	Commitment to Personal Intellectual Develop.	8.993	144.560	.843	.0086		+
10.	ID11	Persistence	8.739	155.010	.324	.0000	R	-
11.	ID27	Changes in Political Opinions	8.244	141.520	.075	.0000		+
12.	ID15	Copability/Flexibility	6.807	156.630	.028	.0000		+
13.	MID5	Personal Life Maintenance	6.680	128.090	.282	.0000		+
14.	ID19	Family Adaptation to Schooling Situation	6.953	32.126	.149	.0000		+
15.	MID6	Persistence with Contextual Sensitivity	-6.452	88.864	.024	.0000		-
16.	ID9	Initiative	5.790	96.329	.034	.0000	R	-
17.	ID16	Sociability	-5.728	92.614	.210	.0000		-
18.	ID13	Prudence/Discretion	-5.663	58.200	.228	.0000		-
19.	ID25	Sense of Well-Being with Life and Work	5.281	31.094	.011	.0000		+
20.	MID1	Interpersonal Skills	5.191	78.474	.156	.0000		+
21.	ID5	Probity/Respect for Laws and Customs	4.524	29.051	.704	.0009	R	-
22.	ID26	Development of Confidence	3.098	11.880	.004	.0000		+
23.	MID2	Disciplined Confidence	-2.975	30.722	.188	.0000		-
24.	ID21	Development of Interpersonal Skills	2.618	19.693	.008	.0000		+
25.	ID30	Capacity to Research and Strategize	-2.516	6.061	.004	.0000		-
26.	ID17	Situational Sensitivity	-1.678	8.371	.005	.0000	R	-
27.	ID1	Positive Marital/Family Relationships	-1.377	5.799	.047	.0000		-

Table 114: Discriminant Analysis Results for D18<sup>155</sup>  
“Appreciation for Social Role Values”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
21	21	-3.890	3.890	.0592	83.393	21	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID27	Changes in Political Opinions	-4.117	97.072	.586	.0004		-
2.	ID20	Development of Communication Skills	3.505	75.363	.316	.0000		+
3.	ID25	Sense of Well-Being with Life and Work	3.115	67.179	.471	.0001		+
4.	ID18	Empathy	-2.935	79.287	.431	.0001		-

<sup>155</sup>Four “spiritual dynamics” variables not included in the table were also identified with D18: ID36 Maintenance of Spiritual Life (-2.013), ID39 Dependence on the Holy Spirit (-1.631), ID34 Dependence on God (-.853), and ID40 Godliness of Life Before People (-.416). One further spiritual variable was left in the table because of its high significance, ID30.



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
5.	ID12	Emotional Self-Control	2.607	55.323	.515	.0001	R	-
6.	ID19	Family Adaptation to Schooling Situation	-1.887	24.492	.135	.0000		-
7.	ID7	Self-control and Confidence	1.732	29.371	.353	.0000		+
8.	ID31	Right Relationships/Concern for People	1.450	12.797	.394	.0001		+
9.	ID8	Risk-taking/Openness to People&Experienc.	1.360	12.354	.167	.0000	R	-
10.	ID10	Perseverance/Diligence	1.235	10.237	.079	.0000		+
11.	ID1	Positive Marital/Family Relationships	1.223	16.696	.700	.0010		+
12.	ID9	Initiative	1.219	13.374	.241	.0000	R	-
13.	ID28	Development of Knowledge, Skills, Gifts	1.154	11.793	.118	.0000		+
14.	MID1	Interpersonal Skills	-.977	11.454	.280	.0000		-
15.	ID11	Persistence	-.966	8.334	.106	.0000	R	+
16.	ID17	Situational Sensitivity	-.964	10.658	.093	.0000	R	+
17.	ID22	Commitment to Learning	-.737	7.360	.217	.0000		-

Table 115: Discriminant Analysis Results for D19<sup>156</sup>  
“Appreciation for Cultural Fine Arts”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	1.981	-2.071	.1890	56.653	18	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID19	Family Adaptation to Schooling Situation	1.279	24.337	.596	.0009		+
2.	ID29	Ability to Work Harmoniously with Others	1.201	20.248	.905	.0395		+
3.	ID10	Perseverance/Diligence	-1.183	21.065	.673	.0027		-
4.	ID13	Prudence/Discretion	1.127	24.055	.808	.0115		-
5.	ID2	Tactfulness	-1.108	13.662	.479	.0002	R	+
6.	MID2	Disciplined Confidence	1.051	16.062	.533	.0003		+
7.	ID1	Positive Marital/Family Relationships	-.856	12.237	.344	.0000		-
8.	ID16	Sociability	.793	9.329	.380	.0000		+
9.	ID4	Analytical Perceptiveness/Curiosity	.739	7.166	.304	.0000		+
10.	MID5	Personal Life Maintenance	.701	7.063	.737	.0055		+
11.	ID17	Situational Sensitivity	-.555	4.516	.242	.0000	R	+
12.	ID15	Copability/Flexibility	-.449	3.167	.277	.0000		-

<sup>156</sup>Four “spiritual dynamics” variables not included in the table were also identified with D19: ID32 Mediation/Peace-Making (-.708), ID33 Spirit-Controlled Holy Life (-.614), ID34 Dependence on God (-.433), and ID37 Dealing with Spiritual Realities (-.850).

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
13. MID4	Self-Controlled Tactfulness	-.324	1.080	.259	.0000	R	+
14. ID6	Confidence in Personal Skills and Judgement	.303	1.540	.189	.0000		+

Table 116: Discriminant Analysis Results for D20<sup>157</sup>  
“Appreciation for Social Customs”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	2.218	-2.121	.1688	60.486	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID25	Sense of Well-Being with Life and Work	1.678	26.264	.605	.0004		+
2. ID18	Empathy	-1.603	33.027	.880	.0199		-
3. ID7	Self-control and Confidence	1.501	26.224	.551	.0002		+
4. ID8	Risk-taking/Openness to People&Experienc.	1.293	28.769	.683	.0012	R	-
5. ID36	Maintenance of Spiritual Life	1.237	16.839	.313	.0000		+
6. ID28	Development of Knowledge, Skills, Gifts	1.207	17.378	.778	.0052		+
7. ID21	Development of Interpersonal Skills	1.314	16.879	.497	.0001		+
8. ID15	Copability/Flexibility	1.072	15.952	.376	.0000		+
9. ID5	Probity/Respect for Laws and Customs	-.843	7.399	.256	.0000	R	+
10. ID13	Prudence/Discretion	-.818	9.350	.409	.0000		-
11. ID26	Development of Confidence	.704	4.908	.352	.0000		+
12. ID10	Perseverance/Diligence	-.602	4.289	.205	.0000		-
13. ID32	Mediation/Peace-Making	-.566	4.466	.185	.0000		-
14. MID2	Disciplined Confidence	-.512	3.911	.217	.0000		-
15. ID30	Capacity to Research and Strategize	.484	3.161	.442	.0000		+
16. ID6	Confidence in Personal Skills and Judgement	-.411	2.170	.232	.0000		-
17. ID2	Tactfulness	.329	1.425	.177	.0000	R	-
18. MID3	Deliberation/Cautiousness	-.315	1.199	.169	.0000		-

<sup>157</sup>Two “spiritual dynamics” variables not included in the table were also identified with D20: ID32 Mediation/Peace-Making (-.566) and ID36 Maintenance of Spiritual Life (1.237).



Table 117: Discriminant Analysis Results for D21<sup>158</sup>  
“Appreciation for Language”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	-1.508	1.508	.2960	43.820	16	.0002

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID5 Probity/Respect for Laws and Customs	.992	13.781	.707	.0021	R	-
2.	MID6 Persistence with Contextual Sensitivity	-.895	9.842	.644	.0010		-
3.	ID19 Family Adaptation to Schooling Situation	.761	6.931	.522	.0005		+
4.	ID28 Development of Knowledge, Skills, Gifts	.756	8.682	.551	.0004		+
5.	ID11 Persistence	.689	6.695	.370	.0002	R	-
6.	ID23 Commitment to Personal Intellectual Develop.	.629	5.223	.447	.0003		+
7.	MID5 Personal Life Maintenance	.525	3.993	.335	.0003		+
8.	ID22 Commitment to Learning	.482	4.018	.849	.0076	P	-
9.	ID12 Emotional Self-Control	.450	3.543	.353	.0003	R	-
10.	ID6 Confidence in Personal Skills and Judgement	-.453	2.834	.387	.0002		-
11.	ID18 Empathy	-.437	3.260	.313	.0003		-
12.	MID3 Deliberation/Cautiousness	-.896	1.810	.287	.0005		-

Table 118: Discriminant Analysis Results for D22<sup>159</sup>  
“Identification with Acceptable Social Fit”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	22	5.446	-5.446	.0312	93.634	30	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	MID1 Interpersonal Skills	4.153	75.529	.509	.0001		+
2.	ID5 Probity/Respect for Laws and Customs	-3.466	59.180	.148	.0000	R	+
3.	ID20 Development of Communication Skills	3.454	66.430	.556	.0001		+
4.	ID24 Language Learning Development	3.146	34.532	.393	.0000		+
5.	ID29 Ability to Work Harmoniously with Others	-3.112	25.322	.323	.0000		-
6.	ID18 Empathy	-2.868	46.326	.454	.0000		-

<sup>158</sup>Four “spiritual dynamics” variables not included in the table were identified with D21: ID36 Maintenance of Spiritual Life (.707), ID37 Dealing with Spiritual Realities (-.734), ID38 Spiritual Gifting for Ministry (.757), and ID39 Dependence on the Holy Spirit (-.446).

<sup>159</sup>Four “spiritual dynamics” variables not included in the table were identified with D22: ID33 Spirit-Controlled Holy Life (2.240), ID34 Dependence on God (-2.644), ID37 Dealing with Spiritual Realities (1.860), ID39 Dependence on the Holy Spirit (3.509) and ID40 Godliness of Life Before People (1.349).

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
7.	ID2	Tactfulness	2.653	45.680	.282	.0000	R	-
8.	ID17	Situational Sensitivity	-2.539	40.807	.353	.0000	R	+
9.	ID21	Development of Interpersonal Skills	2.114	23.372	.064	.0001		+
10.	ID11	Persistence	-2.102	25.129	.206	.0000	R	+
11.	ID23	Commitment to Personal Intellectual Develop.	1.094	18.567	.185	.0000		+
12.	ID9	Initiative	-2.033	22.314	.095	.0000	P/R	-
13.	MID2	Disciplined Confidence	-1.945	22.663	.089	.0000		-
14.	ID6	Confidence in Personal Skills and Judgement	1.917	19.794	.241	.0000		+
15.	ID1	Positive Marital/Family Relationships	-1.691	11.865	.050	.0000		-
16.	ID15	Copability/Flexibility	-1.550	17.690	.085	.0000		-
17.	ID10	Perseverance/Diligence	1.550	13.919	.108	.0000		+
18.	ID28	Development of Knowledge, Skills, Gifts	1.152	9.185	.817	.0037		+
19.	ID4	Analytical Perceptiveness/Curiosity	.966	5.547	.133	.0000		+
20.	ID3	Positive Interpersonal Attitudes/Interaction	-.816	4.844	.102	.0000	R	+
21.	ID7	Self-control and Confidence	-.481	1.432	.115	.0000		-
22.	ID13	Prudence/Discretion	.794	3.380	.256	.0000		+
23.	ID25	Sense of Well-Being with Life and Work	.710	2.866	.034	.0000		+
24.	ID31	Right Relationships/Concern for People	.618	1.246	.031	.0000		+
25.	MID6	Persistence with Contextual Sensitivity	-.788	3.744	.042	.0000		-

Table 119: Discriminant Analysis Results for D23<sup>160</sup>  
“Identification with Traditional, Personal, and Interpersonal Values”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	-2.285	2,186	.1606	63.092	17	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID19	Family Adaptation to Schooling Situation	1.389	35.562	.859	.0111	P	-
2.	MID5	Personal Life Maintenance	.915	13.511	.206	.0000		+
3.	ID12	Emotional Self-Control	.903	8.514	.193	.0000	R	-
4.	ID6	Confidence in Personal Skills and Judgement	.820	11.093	.350	.0000	P	-
5.	MID1	Interpersonal Skills	-.758	9.269	.752	.0025		-
6.	ID10	Perseverance/Diligence	-.729	8.199	.378	.0000		-

<sup>160</sup>Five “spiritual dynamics” variables not included in the table were identified with D23: ID32 Mediation/Peace-Making (-.543), ID34 Dependence on God (-.936), ID35 Prayer-Life (-.330), ID38 Spiritual Gifting for Ministry (.565), and ID39 Dependence on the Holy Spirit (.625).



Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
7.	MID2 Disciplined Confidence	.698	8.929	.460	.0000	P	-
8.	MID4 Self-Controlled Tactfulness	.657	5.714	.169	.0000	R	-
9.	ID17 Situational Sensitivity	.571	5.503	.257	.0000	R	-
10.	ID1 Positive Marital/ Family Relationships	.332	1.534	.273	.0000	P	-
11.	ID8 Risk-taking/Openness to People/Experiences	-.286	1.361	.161	.0000	P/R	-

Table 120: Discriminant Analysis Results for D24<sup>161</sup>  
“Identification with Social Communication Patterns”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	3.161	-3.304	.0838	78.090	23	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID27 Changes in Political Opinions	2.374	28.579	.298	.0000		+
2.	ID6 Confidence in Personal Skills & Judgement	2.199	46.103	.425	.0000		+
3.	MID2 Disciplined Confidence	2.000	39.795	.799	.0020		+
4.	ID18 Empathy	1.571	24.274	.274	.0000		+
5.	ID22 Commitment to Learning	-1.524	19.470	.612	.0001		-
6.	MID1 Interpersonal Skills	-1.301	21.996	.237	.0000	P	+
7.	ID28 Development of Knowledge, Skills, Gifts	-1.219	11.616	.113	.0000		-
8.	ID17 Situational Sensitivity	-.952	12.267	.701	.0006	R	+
9.	ID23 Commitment to Personal Intellect. Develop.	.914	7.042	.180	.0000		+
10.	ID11 Persistence	-.910	11.090	.196	.0000	R	+
11.	ID5 Probity/Respect for Laws and Customs	-.890	8.730	.132	.0000	R	+
12.	ID21 Development of Interpersonal Skills	.769	6.711	.095	.0000		+
13.	ID29 Ability to Work Harmoniously with Others	-.762	5.010	.337	.0000		-
14.	ID14 Interpersonal Interest	.693	4.823	.125	.0000		+
15.	ID13 Prudence/Discretion	.612	4.437	.111	.0000		+
16.	ID20 Development of Communication Skills	-.371	1.026	.538	.0000		-
17.	ID26 Development of Confidence	.619	2.043	.089	.0000		+
18.	MID6 Persistence with Contextual Sensitivity	-.511	2.875	.092	.0000		-

<sup>161</sup>Four “spiritual dynamics” variables not included in the table were identified with D24: ID31 Right Relationships/Concern for People (-.550), ID36 Maintenance of Spiritual Life (-.849), ID38 Spiritual Gifting for Ministry (-.315), and ID39 Dependence on the Holy Spirit (1.395).

Table 121: Discriminant Analysis Results for D25<sup>162</sup>  
“Identification with Social Role Values”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	2.616	-2.616	.1227	66.094	25	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID28	Development of Knowledge, Skills, Gifts	1.860	19.949	.311	.0006		+
2.	ID19	Family Adaptation to Schooling Situation	-1.634	18.193	.252	.0005		-
3.	ID4	Analytical Perceptiveness/Curiosity	1.443	15.255	.435	.0004		+
4.	ID25	Sense of Well-Being with Life and Work	1.411	8.589	.593	.0016		+
5.	ID18	Empathy	1.370	16.554	.642	.0025		+
6.	ID14	Interpersonal Interest	1.364	16.603	.772	.0117		+
7.	ID13	Prudence/Discretion	-1.277	14.559	.241	.0002		-
8.	ID24	Language Learning Development	-1.133	7.211	.505	.0007		-
9.	ID29	Ability to Work Harmoniously with Others	-1.056	7.350	.405	.0003		-
10.	MID4	Self-Controlled Tactfulness	-.971	5.494	.914	.0484	R	+
11.	ID23	Commitment to Personal Intellectual Develop.	-.864	5.343	.282	.0008		-
12.	ID30	Capacity to Research and Strategize	-.847	3.369	.390	.0003		-
13.	ID12	Emotional Self-Control	.834	5.235	.269	.0005	R	-
14.	ID31	Right Relationships/Concern for People	.810	5.136	.186	.0000		+
15.	ID8	Risk-taking/Openness to People&Experienc.	.755	5.952	.202	.0000	R	-
16.	ID2	Tactfulness	.568	2.466	.156	.0000	R	-
17.	ID5	Probity/ Respect for Laws and Customs	-.828	2.291	.131	.0001	R	+
18.	ID11	Persistence	.503	1.677	.203	.0001	R	-
19.	ID20	Development of Communication Skills	.722	3.443	.196	.0000		+
20.	ID22	Commitment to Learning	.613	2.719	.174	.0000		+

Table 122: Discriminant Analysis Results for D26<sup>163</sup>  
“Enjoyment of Social Activities/Interaction”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	1.180	-1.128	.4179	32.718	11	.0006

<sup>162</sup>Four “spiritual dynamics” variables not included in the table were identified with D25: ID32 Mediation/Peace-Making (-.418), ID34 Dependence on God (.474), ID37 Dealing with Spiritual Realities (-1.909), and ID38 Spiritual Gifting for Ministry (-1.761).

<sup>163</sup>One “spiritual dynamics” variable not included in the table but identified with D26 was ID37 Dealing with Spiritual Realities (-.713).



Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	MID6 Persistence with Contextual Sensitivity	.979	16.314	.843	.0277		+
2.	ID13 Prudence/Discretion	.881	10.591	.564	.0021		+
3.	ID7 Self-control and Confidence	-.674	6.809	.771	.0128		-
4.	ID12 Emotional Self-Control	.636	6.813	.486	.0011	R	-
5.	ID31 Right Relationships/Concern for People	.540	5.395	.613	.0034		+
6.	ID8 Risk-taking/Openness to People&Experienc.	-.526	4.600	.532	.0019	R	+
7.	ID23 Commitment to Personal Intellectual Develop.	.486	3.983	.453	.0009		+
8.	ID2 Tactfulness	.388	2.336	.434	.0005	R	-
9.	ID5 Probity/Respect for Laws and Customs	-.287	1.267	.418	.0007	P/R	-
10.	ID22 Commitment to Learning	-.413	2.336	.923	.0642	P	+

Table 123: Discriminant Analysis Results for D27<sup>164</sup>  
“Enjoyment of National Recreational Activities”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	-14.980	15.661	.0041	134.932	37	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID4 Analytical Perceptiveness/Curiosity	-29.388	329.440	.597	.0022		-
2.	ID28 Development of Knowledge, Skills, Gifts	19.919	346.440	.272	.0002		+
3.	ID19 Family Adaptation to Schooling Situation	18.033	180.190	.402	.0004		+
4.	ID22 Commitment to Learning	-15.081	135.060	.052	.0000		-
5.	MID4 Self-Controlled Tactfulness	13.797	203.370	.870	.0149	R	-
6.	ID8 Risk-taking/Openness to People&Experienc.	13.646	237.630	.638	.0027	R	-
7.	ID2 Tactfulness	-12.826	139.420	.092	.0001	R	+
8.	ID9 Initiative	12.205	146.970	.101	.0001	R	-
9.	ID1 Positive Marital/Family Relationships	-11.924	157.520	.508	.0010		-
10.	ID25 Sense of Well-Being with Life and Work	-10.149	61.755	.179	.0001		-
11.	MID6 Persistence with Contextual Sensitivity	-9.775	61.192	.059	.0000		-
12.	MID2 Disciplined Confidence	9.218	94.781	.380	.0004		+
13.	ID15 Copability/Flexibility	8.678	106.340	.162	.0001		+
14.	ID3 Positive Interpersonal Attitudes/Interaction	-8.645	35.868	.108	.0001	R	+
15.	ID27 Changes in Political Opinions	8.328	18.060	.036	.0000		+

<sup>164</sup>Nine “spiritual dynamics” variables identified with D27 were not included in the table: ID32 Mediation/Peace-Making (1.871), ID33 Spirit-Controlled Holy Life (-1.866), ID34 Dependence on God (-20.071), ID35 Prayer-Life (-1.654), ID36 Maintenance of Spiritual Life (10.878), ID37 Dealing with Spiritual Realities (-3.406), ID38 Spiritual Gifting for Ministry (7.355), ID39 Dependence on the Holy Spirit (14.139), and ID40 Godliness of Life Before People (12.893).

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
16. ID21	Development of Interpersonal Skills	7.688	52.476	.772	.0044		+
17. ID18	Empathy	7.051	97.611	.332	.0006		+
18. ID31	Right Relationships/Concern for People	-6.619	25.290	.031	.0000	P	+
19. ID5	Probity/Respect for Laws and Customs	6.154	48.552	.026	.0000	R	-
20. ID7	Self-control and Confidence	5.439	17.732	.013	.0000		+
21. ID26	Development of Confidence	-4.376	11.411	.727	.0042		-
22. ID16	Sociability	-4.351	37.082	.042	.0000		-
23. ID13	Prudence/Discretion	-3.460	8.671	.019	.0000		-
24. ID24	Language Learning Development	-3.046	12.808	.016	.0000		-
25. ID17	Situational Sensitivity	2.732	12.027	.221	.0001	R	-
26. ID10	Perseverance/Diligence	2.080	5.995	.007	.0000	P	-
27. ID11	Persistence	-1.992	9.269	.119	.0001	R	+
28. MID5	Personal Life Maintenance	1.672	2.904	.360	.0005		+

Table 124: Discriminant Analysis Results for D28<sup>165</sup>  
“Enjoyment of National Arts/Hobbies”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	3.416	-3.267	.0789	72.391	29	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID20	Development of Communication Skills	-3.076	37.999	.399	.0001		-
2. MID1	Interpersonal Skills	2.388	35.013	.662	.0052		+
3. MID4	Self-Controlled Tactfulness	2.185	21.205	.483	.0004	R	-
4. ID9	Initiative	-2.143	21.185	.918	.0559	R	+
5. ID28	Development of Knowledge, Skills, Gifts	-1.815	21.991	.317	.0002		-
6. ID15	Copability/Flexibility	1.716	17.970	.450	.0004		+
7. ID27	Changes in Political Opinions	1.684	10.633	.199	.0001		+
8. ID30	Capacity to Research and Strategize	-1.500	15.663	.583	.0015		-
9. ID24	Language Learning Development	-1.374	9.353	.258	.0000		-
10. ID10	Perseverance/Diligence	-1.341	12.027	.165	.0001		-
11. ID21	Development of Interpersonal Skills	1.265	9.077	.266	.0001		+
12. MID3	Deliberation/Cautiousness	-1.207	6.512	.521	.0006		-

<sup>165</sup>Five “spiritual dynamics” variables identified with D28 were not included in the table: ID31 Right Relationships/Concern for People (.860), ID35 Prayer-Life (-1.395), ID36 Maintenance of Spiritual Life (1.072), ID37 Dealing with Spiritual Realities (1.794), and ID38 Spiritual Gifting for Ministry (-.865).



Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
13. ID16	Sociability	1.143	5.500	.143	.0001		+
14. ID19	Family Adaptation to Schooling Situation	1.088	6.673	.825	.0178		+
15. ID12	Emotional Self-Control	-1.056	6.969	.379	.0002	P/R	-
16. ID7	Self-control and Confidence	1.001	4.810	.226	.0001		+
17. MID2	Disciplined Confidence	.997	4.937	.341	.0002		+
18. ID2	Tactfulness	.991	6.082	.131	.0001	R	-
19. ID6	Confidence in Personal Skills and Judgement	.763	4.078	.715	.0082		+
20. MID6	Persistence with Contextual Sensitivity	.621	2.769	.097	.0002		+
21. ID3	Positive Interpersonal Attitudes/Interaction	.716	1.686	.085	.0002	R	-
22. ID11	Persistence	.724	5.329	.106	.0001	R	-
23. ID13	Prudence/Discretion	-.706	3.482	.113	.0001		-
24. MID5	Personal Life Maintenance	.492	1.248	.079	.0003		+

Table 125: Discriminant Analysis Results for D29  
“Cultural Involvement and Research Skills”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	4.634	-4.845	0.0408	92.795	28	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID38	Spiritual Gifting for Ministry	-5.716	96.037	.695	.0017		-
2. ID2	Tactfulness	4.805	84.321	.405	.0000	R	-
3. ID30	Capacity to Research and Strategize	3.895	86.180	.623	.0007		+
4. ID36	Maintenance of Spiritual Life	-3.549	61.845	.555	.0002		-
5. ID25	Sense of Well-being with Life and Work	3.263	61.247	.750	.0024		+
6. ID33	Spirit-Controlled Holy Life	-2.647	24.357	.156	.0000		-
7. MID3	Deliberation/Cautiousness	2.547	21.289	.215	.0000		+
8. ID1	Positive Family/Marital Relationships	2.390	35.951	.308	.0000		+
9. ID22	Commitment to Learning	1.883	17.981	.126	.0000		+
10. ID31	Right Relationships/Concern for People	1.853	21.124	.897	.0316		+
11. ID12	Emotional Self-Control	1.782	21.299	..253	.0000	R	-
12. ID35	Prayer-Life	-1.629	8.844	.072	.0000		-
13. ID29	Ability to Work Harmoniously With Others	1.575	18.337	.115	.0000		+
14. ID18	Empathy	1.504	14.283	.099	.0000		+
15. ID23	Commitment to Personal Intellectual Develop.	-1.364	9.104	.351	.0000		-
16. ID27	Changes in Political Opinions	-1.199	6.863	.126	.0000		-
17. ID3	Positive Interpersonal Attitudes/Interaction	-1.158	7.373	.482	.0001	R	+

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	◆
18. MID4	Self-Controlled Tactfulness	1.017	8.428	.135	.0000	R	-
19. MID1	Interpersonal Skills	1.011	7.439	.197	.0000		+
20. ID37	Dealing with Spiritual Realities	.990	8.406	.233	.0000		+
21. ID16	Sociability	-.953	6.155	.054	.0000		-
22. ID21	Development of Interpersonal Skills	1.953	4.273	.048	.0000		+
23. ID11	Persistence	.778	4.213	.084	.0000	R	-
24. ID17	Situational Sensitivity	.895	3.664	.279	.0000	R	-
25. ID8	Risk-taking/Openness to People&Experienc.	-.501	1.288	.064	.0000	R	+
26. ID26	Development of Confidence	.716	2.604	.045	.0000		+
27. MID2	Disciplined Confidence	-.543	2.608	.058	.0000		-
28. MID5	Personal Life Maintenance	.642	1.618	.041	.0000	P	-

Table 126: Discriminant Analysis Results for D30  
“Contextualized Church Development Skills”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	2.500	-2.391	0.1378	67.378	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	◆
1. ID36	Maintenance of Spiritual Life	1.397	44.202	.580	.0002		+
2. ID12	Emotional Self-Control	-1.742	22.497	.238	.0000	R	+
3. MID1	Interpersonal Skills	1.443	25.725	.753	.0026		+
4. MID3	Deliberation/Cautiousness	1.374	29.005	.656	.0006		+
5. ID39	Dependence on the Holy Spirit	1.122	15.971	.176	.0000		+
6. ID8	Initiative	1.139	11.504	.226	.0000	R	-
7. ID11	Persistence	-1.051	17.323	.833	.0052	R	+
8. ID4	Analytical Perceptiveness/Curiosity	-.939	9.681	.192	.0000		-
9. ID35	Prayer-Life	.893	10.438	.199	.0000		+
10. ID5	Probity/Respect for Laws and Customs	.868	11.703	.341	.0000	R	-
11. ID30	Capacity to Research and Strategize	.834	8.729	.377	.0000		+
12. ID6	Confidence in Personal Skills and Judgement	-.804	10.740	.290	.0000	P	+
13. ID37	Dealing with Spiritual Realities	-.678	6.320	.161	.0000		-
14. ID20	Development of Communication Skills	.604	4.581	.144	.0000	P	-
15. ID18	Empathy	-.511	4.251	.172	.0000		-
16. MID6	Persistence with Contextual Sensitivity	.504	4.441	.272	.0000		+
17. ID23	Commitment to Personal Intellectual Develop.	.380	2.041	.255	.0000		+
18. ID22	Commitment to Learning	.299	1.185	.138	.0000		+



Table 127: Discriminant Analysis Results for D31  
“Change-Agent Skills”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	-2.439	2.550	0.1331	67.548	19	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID7	Self-control and Confidence	2.495	45.246	.483	.0000		+
2. ID31	Right Relationships/Concern for People	2.258	36.554	.419	.0000		+
3. ID32	Mediation/Peace-Making	-2.254	31.329	.356	.0000		-
4. ID14	Interpersonal Interest	-2.001	31.785	.307	.0000		-
5. MID4	Self-Controlled Tactfulness	1.971	41.041	.652	.0005	R	-
6. ID18	Empathy	-1.792	46.779	.533	.0000		-
7. ID25	Sense of Well-Being with Life and Work	1.313	13.315	.389	.0000		+
8. ID29	Ability to Work Harmoniously with Others	-1.199	20.305	.745	.0021		-
9. ID15	Copability/Flexibility	1.109	13.235	.259	.0000		+
10. ID12	Emotional Self-Control	0.950	10.856	.445	.0000	R	-
11. MID6	Persistence with Contextual Sensitivity	-0.825	8.560	.183	.0000		-
12. ID2	Tactfulness	0.757	6.656	.205	.0000	R	-
13. ID16	Sociability	-0.747	7.196	.230	.0000		-
14. ID13	Prudence/Discretion	0.680	7.242	.279	.0000		+
15. ID23	Commitment to Personal Intellect. Develop.	0.541	3.763	.152	.0000		+
16. ID21	Development of Interpersonal Skills	-0.527	4.032	.169	.0000	P	+
17. ID9	Initiative	0.518	2.379	.140	.0000	R	-
18. ID5	Probity/Respect for Laws and Customs	0.389	2.047	.146	.0000	R	-
19. ID20	Development of Communication Skills	0.373	1.229	.845	.0076		+

Table 128: Discriminant Analysis Results for MD1  
“Contextualization of Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
22	23	11.223	-10.735	.0079	123.54	35	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID16	Sociability	14.114	221.570	.503	.0008		+
2. ID26	Development of Confidence	-9.569	58.421	.201	.0000		-
3. ID29	Ability to Work Harmoniously with Others	8.544	156.760	.349	.0001		+
4. ID6	Confidence in Personal Skills and Judgement	7.792	198.370	.558	.0017		+

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
5.	ID21	Development of Interpersonal Skills	-7.714	97.013	.157	.0000		-
6.	ID31	Right Relationships/Concern for People	7.692	74.930	.058	.0000		+
7.	ID28	Development of Knowledge, Skills, Gifts	7.655	139.940	.189	.0000		+
8.	MID4	Self-Controlled Tactfulness	7.279	87.869	.687	.0040	R	-
9.	ID18	Empathy	6.797	61.604	.122	.0000		+
10.	ID20	Development of Communication Skills	-6.765	46.954	.454	.0004		-
11.	ID4	Analytical Perceptiveness/Curiosity	6.216	104.050	.417	.0003		+
12.	ID32	Mediation/Peace-Making	-5.676	40.886	.175	.0000		-
13.	ID22	Commitment to Learning	5.483	69.065	.111	.0000		+
14.	MID6	Persistence with Contextual Sensitivity	5.250	83.441	.101	.0000		+
15.	ID17	Situational Sensitivity	4.730	29.253	.034	.0000	R	-
16.	ID5	Probity/Respect for Laws and Customs	-4.414	40.433	.647	.0035	R	+
17.	ID30	Capacity to Research and Strategize	-4.152	18.879	.281	.0000		-
18.	ID37	Dealing with Spiritual Realities	-4.088	19.588	.086	.0000		-
19.	ID14	Interpersonal Interest	-3.817	19.265	.032	.0000		-
20.	MID3	Deliberation/Cautiousness	3.760	53.440	.903	.0373		+
21.	ID7	Self-control and Confidence	3.490	15.785	.145	.0000		+
22.	ID13	Prudence/Discretion	3.469	27.712	.242	.0000		+
23.	ID9	Initiative	3.318	30.189	.039	.0000	R	-
24.	ID3	Positive Interpersonal Attitudes/Interaction	3.129	17.677	.051	.0000	R	-
25.	MID5	Personal Life Maintenance	-1.906	11.857	.060	.0000		-
26.	ID1	Positive Family/Marital Relationships	-1.740	7.491	.025	.0000		-
27.	ID19	Family Adaptation to Schooling Situation	-1.721	4.169	.601	.0024		-
28.	ID2	Tactfulness	-1.684	4.462	.012	.0000	R	+
29.	ID12	Emotional Self-Control	-1.534	5.107	.009	.0000	R	+
30.	ID10	Perseverance/Diligence	-1.519	5.896	.015	.0000		-
31.	ID27	Changes in Political Opinions	1.063	1.771	.008	.0000		+

Table 129: Discriminant Analysis Results for MD2  
“Commitment to Creative/Viable Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	-39.56471	41.36311	.0006	178.713	38	.0000



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➔
1.	ID25	Sense of Well-Being with Life and Work <sup>166</sup>	-28.538	395.490	.253	.0000		-
2.	ID23	Commitment to Personal Intellect. Develop.	24.482	492.450	.325	.0000		+
3.	ID13	Prudence/Discretion	24.266	282.480	.085	.0000		+
4.	ID10	Perseverance/Diligence	-23.888	369.820	.276	.0000		-
5.	ID20	Development of Communication Skills	-23.619	340.930	.040	.0000		-
6.	ID1	Positive Marital/Family Relationships	23.168	290.390	.045	.0000	R	-
7.	ID39	Dependence on the Holy Spirit	-22.742	229.530	.576	.0002		-
8.	ID7	Self-control and Confidence	20.733	289.630	.130	.0000		+
9.	MID6	Persistence with Contextual Sensitivity	-19.566	647.570	.458	.0000		-
10.	ID36	Maintenance of Spiritual Life	19.430	218.760	.032	.0000		+
11.	ID31	Right Relationships/Concern for People	18.419	178.860	.092	.0000		+
12.	ID27	Changes in Political Opinions	16.068	167.560	.025	.0000		+
13.	MID1	Interpersonal Skills	-15.105	302.740	.811	.0029		-
14.	ID19	Family Adaptation to Schooling Situation	-14.172	167.000	.114	.0000		-
15.	ID9	Initiative	13.858	89.361	.662	.0007	R	-
16.	ID37	Dealing with Spiritual Realities	13.537	367.860	.142	.0000		+
17.	ID30	Capacity to Research and Strategize	-12.309	91.223	.065	.0000		-
18.	ID32	Mediation/Peace-Making	-12.011	63.398	.007	.0000	P	+
19.	MID4	Self-Controlled Tactfulness	11.414	113.240	.207	.0000	R	-
20.	ID35	Prayer-Life	-11.507	90.966	.722	.0011		-
21.	ID3	Positive Interpersonal Attitudes/Interaction	11.019	154.650	.360	.0000	R	-
22.	ID24	Language Learning Development	-10.110	85.917	.052	.0000		-
23.	ID38	Spiritual Gifting for Ministry	-10.410*	71.836	.512	.0001		-
24.	ID8	Risk-taking/Openness to People&Experienc.	-23.888	74.099	.227	.0000	R	+
25.	ID4	Analytical Perceptiveness/Curiosity	9.899	58.337	.014	.0000		+
26.	ID16	Sociability	-8.614	46.460	.161	.0000		-
27.	ID34	Dependence on God	8.488	49.439	.004	.0000		+
28.	MID2	Disciplined Confidence	7.517	57.494	.022	.0000		+
29.	ID6	Confidence in Personal Skills and Judgement	6.650	52.194	.008	.0000		+
30.	ID33	Spirit-Controlled Holy Life	6.206	18.532	.401	.0000		+
31.	MID3	Deliberation/Cautiousness	-5.100	15.850	.015	.0000		-

<sup>166</sup>MID6 has such a dominant Partial-F that it produces a profound effect on the other variables. When it is removed from the equation, every negative variable except two become positive (ID25, ID10, ID20, ID39, MID1, ID19, ID30, ID32, ID35, ID24, ID8, ID16, MID3, MID5, ID26, and ID40). Of the other two, one is removed (ID38) and the other (ID17) becomes positive because of its negative factor-direction.

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
32. MID5	Personal Life Maintenance	-4.767	13.937	.001	.0000		-
33. ID26	Development of Confidence	-4.197	21.051	.005	.0000		-
34. ID15	Copability/Flexibility	4.171	35.628	.057	.0000		+
35. ID2	Tactfulness	1.616	2.101	.181	.0000	R	-
36. ID40	Godliness of Life Before People	-1.574	1.796	.001	.0000		-
37. ID17	Situational Sensitivity	-1.412	2.934	.001	.0000	R	+
38. ID11	Persistence	1.347	2.802	.001	.0000	R	-

Table 130: Discriminant Analysis Results for MD3  
“Adequate Ministry Education/Training”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	22	4.8037	-5.0221	.0381	93.125	29	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID30	Capacity to Research and Strategize	-6.071	113.300	.405	.0000		-
2. ID26	Development of Confidence	4.607	64.784	.278	.0000		+
3. ID24	Language Learning Development	4.322	72.944	.455	.0001		+
4. MID1	Interpersonal Skills	4.209	80.590	.291	.0000		+
5. ID17	Situational Sensitivity	-3.793	68.319	.231	.0000	R	+
6. ID20	Development of Communication Skills	3.746	54.469	.261	.0000		+
7. ID32	Mediation/Peace-Making	-3.063	45.133	.315	.0000		-
8. ID25	Sense of Well-Being with Life and Work	2.884	19.625	.104	.0000		+
9. ID8	Risk-taking/Openness to People&Experienc.	2.484	43.983	.384	.0000	R	-
10. MID6	Persistence with Contextual Sensitivity	-2.397	18.677	.089	.0000		-
11. ID28	Development of Knowledge, Skills, Gifts	-2.300	22.669	.127	.0000		-
12. ID1	Positive Marital/Family Relationships	2.170	33.137	.736	.0016		+
13. ID12	Emotional Self-Control	-2.230	14.014	.079	.0000	R	+
14. ID29	Ability to Work Harmoniously with Others	-2.041	24.383	.137	.0000		-
15. ID18	Empathy	-1.923	24.858	.633	.0002		-
16. ID36	Maintenance of Spiritual Life	-1.846	21.147	.484	.0001		-
17. ID23	Commitment to Personal Intellect. Develop.	1.580	13.726	.509	.0001		+
18. ID22	Commitment to Learning	1.442	6.987	.357	.0000		+
19. MID5	Personal Life Maintenance	1.305	8.123	.059	.0000		+
20. ID6	Confidence in Personal Skills and Judgement	-1.289	10.121	.166	.0000		-
21. ID27	Changes in Political Opinions	1.194	3.416	.151	.0000		+
22. ID10	Perseverance/Diligence	1.121	7.785	.183	.0000		+



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
23. ID34	Dependence on God		1.095	6.789	.067	.0000		+
24. ID33	Spirit-Controlled Holy Life		.986	4.393	.053	.0000		+
25. ID35	Prayer-Life		-.973	5.230	.114	.0000		-
26. ID3	Positive Interpersonal Attitudes/Interaction		-.653	2.315	.208	.0000	R	+
27. ID4	Analytical Perceptiveness/Curiosity		-.445	1.941	.047	.0000		-
28. ID16	Sociability		.572	1.855	.038	.0000		+
29. MID3	Deliberation/Cautiousness		.820	3.005	.633	.0003		+

Table 131: Discriminant Analysis Results for MD4  
“Active Acculturation”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
23	23	-17.7268	17.7268	.0030	156.536	34	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1. ID13	Prudence/Discretion <sup>167</sup>		-11.888	278.000	.116	.0000		-
2. ID18	Empathy		-11.792	311.480	.379	.0000		-
3. ID8	Risk-taking/Openness to People&Experienc.		10.884	195.630	.070	.0000	R	-
4. ID25	Sense of Well-Being with Life and Work		-9.226	184.780	.249	.0000		-
5. ID37	Dealing with Spiritual Realities		8.514	266.450	.442	.0000		+
6. ID38	Spiritual Gifting for Ministry		8.482	248.580	.034	.0000		+
7. MID3	Deliberation/Cautiousness		8.449	199.590	.310	.0000		+
8. ID1	Positive Marital/Family Relationships		7.271	142.270	.127	.0000		+
9. ID17	Situational Sensitivity		6.844	140.610	.346	.0000	R	-
10. MID6	Persistence with Contextual Sensitivity		-6.820	226.820	.739	.0003		-
11. ID39	Dependence on the Holy Spirit		6.588	79.159	.020	.0000		+
12. ID7	Self-control and Confidence		6.534	88.014	.011	.0000		+
13. ID36	Maintenance of Spiritual Life		-6.061	166.360	.272	.0000		-
14. MID4	Self-Controlled Tactfulness		5.073	93.535	.170	.0000	R	-
15. ID22	Commitment to Learning		-4.419	55.957	.038	.0000		-
16. ID20	Development of Communication Skills		-4.419	68.099	.210	.0000		-
17. ID6	Confidence in Personal Skills and Judgement		-4.410	57.897	.036	.0000		-

<sup>167</sup>It would appear that two variables have a confounding effect on the others, ID13 and ID18, because of their high Partial-F values. When they were removed from the equation, six negative variables became positive (ID25, MID6, ID27, ID24, ID19, and ID21), five negative variables were removed (ID20, ID6, ID31, ID15, and ID12), while two variables that also had negative Pearson coefficients, remained negative (ID22 and MID1).

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
18. ID10	Perseverance/Diligence	4.375	106.490	.005	.0000		+
19. ID32	Mediation/Peace-Making	4.351	90.226	.006	.0000		+
20. ID30	Capacity to Research and Strategize	4.150	46.337	.009	.0000		+
21. ID27	Changes in Political Opinions	-4.074	35.393	.052	.0000		-
22. ID35	Prayer-Life	3.389	38.646	.082	.0000		+
23. ID11	Persistence	3.763	49.318	.028	.0000	R	-
24. ID31	Right Relationships/Concern for People	-3.233	24.603	.096	.0000		-
25. ID15	Copability/Flexibility	-2.997	34.370	.059	.0000		-
26. ID24	Language Learning Development	-2.565	14.020	.410	.0000		-
27. ID5	Probity/Respect for Laws and Customs	2.396	17.260	.645	.0001	R	-
28. ID3	Positive Interpersonal Attitudes/Interaction	2.256	11.005	.030	.0000	R	-
29. ID28	Development of Knowledge, Skills, Gifts	1.786	13.548	.010	.0000		+
30. ID12	Emotional Self-Control	-1.379	4.203	.004	.0000	R	+
31. ID19	Family Adaptation to Schooling Situation	-1.205	5.104	.016	.0000		-
32. ID21	Development of Interpersonal Skills	-1.330	3.948	.023	.0000		-
33. MID5	Personal Life Maintenance	.982	2.711	.003	.0000		+
34. MID1	Interpersonal Skills	-.635	1.871	.010	.0000		-

Table 132: Discriminant Analysis Results for ND1  
“Adjustment to Culture and Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
20	18	2.4344	-2.7049	.1258	55.978	18	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1. ID35	Prayer-Life	1.461	21.114	.826	.0092		+
2. ID28	Development of Knowledge, Skills, Gifts	1.388	15.649	.340	.0000		+
3. ID33	Spirit-Controlled Holy Life	1.379	17.981	.691	.0015		+
4. ID38	Spiritual Gifting for Ministry	-1.317	15.090	.403	.0000		-
5. ID20	Development of Communication Skills	1.270	7.956	.182	.0000		+
6. ID2	Tactfulness	-1.263	18.472	.519	.0002/	P/R	-
7. ID14	Interpersonal Interest	1.006	9.847	.383	.0000		+
8. ID40	Godliness of Life Before People	.833	4.939	.585	.0003		+
9. ID32	Mediation/Peace-Making	.813	4.667	.200	.0000		+
10. ID10	Perseverance/Diligence	-.678	4.921	.266	.0000		-
11. ID21	Development of Interpersonal Skills	.751	4.926	.169	.0000		+



Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
12. ID8	Risk-taking/Openness to People&Experienc.	.630	2.477	.429	.0000	R	-
13. ID3	Positive Interpersonal Attitudes/Interaction	-.620	3.264	.158	.0000	R	+
14. ID26	Development of Confidence	.576	2.469	.139	.0000	P	-
15. ID30	Capacity to Research and Strategize	-.563	2.913	.148	.0000	P	+
16. ID17	Situational Sensitivity	-.527	1.952	.126	.0000	R	+
17. ID34	Dependence on God	-.509	2.616	.359	.0000		-
18. ID13	Prudence/Discretion	.469	2.236	.224	.0000		+

Table 133: Discriminant Analysis Results for ND2  
“Ministry Effectiveness”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
17	18	33.7040	-31.8316	.0009	130.199	29	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1. ID9	Initiative	30.176	257.550	.828	.0132	R	-
2. ID23	Commitment to Personal Intellect. Develop.	21.171	530.380	.643	.0031		+
3. ID24	Language Learning Development	19.822	498.280	.215	.0001		+
4. ID36	Maintenance of Spiritual Life	-19.248	575.410	.401	.0004		-
5. MID5	Personal Life Maintenance	17.777	231.130	.452	.0006		+
6. ID27	Changes in Political Opinions	17.669	141.160	.070	.0000		+
7. ID28	Development of Knowledge, Skills, Gifts	-16.427	384.090	.165	.0000		-
8. ID14	Interpersonal Interest	-15.329	304.610	.361	.0003		-
9. ID2	Tactfulness	14.354	236.180	.580	.0021	R	-
10. ID16	Sociability	13.409	296.350	.245	.0001		+
11. ID4	Analytical Perceptiveness/Curiosity	12.544	163.760	.269	.0001		-
12. ID19	Family Adaptation to Schooling Situation	-11.898	250.170	.502	.0008		-
13. ID30	Capacity to Research and Strategize	11.604	258.410	.733	.0132		+
14. ID40	Godliness of Life Before People	-11.535	98.694	.186	.0000		-
15. ID15	Copability/Flexibility	-10.559	296.350	.123	.0000	P	+
16. ID17	Situational Sensitivity	9.881	121.670	.059	.0000	R	-
17. ID31	Right Relationships/Concern for People	8.598	35.843	.007	.0000		+
18. MID2	Disciplined Confidence	8.381	32.069	.051	.0000		+
19. ID37	Dealing with Spiritual Realities	-7.368	96.145	.025	.0000		-
20. ID39	Dependence on the Holy Spirit	-7.339	49.032	.079	.0000		-
21. ID18	Empathy	-6.650	27.845	.003	.0000		-
22. ID11	Persistence	5.677	35.442	.033	.0000	R	-

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
23. ID29	Ability to Work Harmoniously with Others		5.108	27.800	.016	.0000		+
24. ID20	Development of Communication Skills		4.691	17.922	.009	.0000		+
25. ID21	Development of Interpersonal Skills		4.229	28.022	.041	.0000		+
26. ID10	Perseverance/Diligence		3.992	10.231	.142	.0000		+
27. ID35	Prayer-Life		-3.577	11.911	.002	.0000		-
28. ID6	Confidence in Personal Skills and Judgement		-2.243	4.501	.001	.0000		-
29. ID1	Positive Marital/Family Relationships		1.352	1.381	.001	.0000		+

Table 134: Discriminant Analysis Results for ND3  
“Psychological Health”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	17	33.9499	-35.9470	.0008	132.581	29	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1. ID26	Development of Confidence		30.923	489.950	.723	.0168		+
2. ID23	Commitment to Personal Intellect. Develop.		-29.421	1206.600	.674	.0160		-
3. MID2	Disciplined Confidence		27.921	1170.000	.425	.0041		+
4. ID10	Perseverance/Diligence		26.285	439.960	.169	.0002		+
5. ID11	Persistence		-23.606	1067.700	.210	.0004	R	+
6. ID2	Tactfulness		-20.188	491.810	.368	.0021	R	+
7. ID40	Godliness of Life Before People		-19.597	547.120	.124	.0000		-
8. ID7	Self-Control and Confidence		16.994	282.340	.099	.0001		+
9. MID1	Interpersonal Skills		15.131	182.960	.079	.0000		+
10. ID32	Mediation/Peace-Making		15.000	154.910	.240	.0004		+
11. ID19	Family Adaptation to Schooling Situation		-14.372	159.490	.034	.0000		-
12. ID36	Maintenance of Spiritual Life		-13.647	312.060	.325	.0014		-
13. ID24	Language Learning Development		11.017	125.060	.273	.0007		+
14. MID5	Personal Life Maintenance		-9.922	158.280	.023	.0000		-
15. ID28	Development of Knowledge, Skills, Gifts		9.891	178.660	.042	.0000		+
16. ID16	Sociability		-9.855	113.300	.111	.0000		-
17. ID34	Dependence on God		9.139	45.283	.005	.0000		+
18. ID33	Spirit-Controlled Holy Life		-9.059	49.370	.607	.0097		-
19. ID31	Right Relationships/Concern for People		7.168	66.612	.017	.0000		+
20. MID6	Persistence with Contextual Sensitivity		7.085	64.749	.138	.0000		+
21. ID8	Risk-taking/Openness to People&Experienc.		-6.806	38.055	.501	.0051	R	+



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
22. ID21	Development of Interpersonal Skills		-6.623	77.532	.873	.0357	P	+
23. ID30	Capacity to Research and Strategize		-6.537	18.789	.002	.0000		-
24. ID18	Empathy		3.784	16.937	.010	.0000		+
25. ID38	Spiritual Gifting for Ministry		3.077	9.718	.001	.0000		+
26. ID12	Emotional Self-Control		2.714	4.693	.156	.0001	R	-
27. ID27	Changes in Political Opinions		2.415	4.738	.004	.0000		+
28. ID4	Analytical Perceptiveness/Curiosity		2.323	9.516	.014	.0000		+
29. ID20	Development of Communication Skills		1.807	3.574	.001	.0000		+

Table 135: Discriminant Analysis Results for ND4  
“Concern for Contextualizing Ministry”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
19	17	-1.6133	1.8032	.2451	35.857	17	.0048

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1. ID28	Development of Knowledge, Skills, Gifts		-1.740 <sup>168</sup>	16.887	.771	.0804		-
2. ID5	Probity/Respect for Laws and Customs		1.719	23.376	.852	.1578	R	-
3. MID3	Deliberation/Cautiousness		-1.577	14.725	.729	.0764		-
4. ID16	Sociability		1.380	14.844	.950	.1896		+
5. ID32	Mediation/Peace-Making		1.290	9.216	.680	.0639		-
6. ID14	Interpersonal Interest		1.233	10.384	.598	.0537		+
7. ID40	Godliness of Life Before People		-1.172	9.142	.493	.0268		-
8. ID4	Analytical Perceptiveness/Curiosity		1.080	8.724	.387	.0106		+
9. ID3	Positive Interpersonal Attitudes/Interactions		1.037	7.612	.549	.0409	R	-
10. ID29	Ability to Work Harmoniously with Others		.838	4.044	.446	.0198		+
11. ID36	Maintenance of Spiritual Life		-.814	6.294	.638	.0578		-
12. ID6	Confidence in Personal Skills and Judgement		-.777	5.281	.909	.2081		-
13. ID22	Commitment to Learning		.746	4.064	.314	.0070		+
14. ID2	Tactfulness		.648	3.310	.345	.0077	R	-
15. MID4	Self-Controlled Tactfulness		.535	2.089	.270	.0087	R	-
16. ID15	Copability/Flexibility		-.497	1.479	.290	.0073	P	+
17. ID8	Risk-taking/Openness to People&Experienc.		-.432	1.865	.245	.0085	R	+

<sup>168</sup>There does not seem to be a confounding variable here. When the highest Partial-F variable (ID5) was removed, it made very little difference to the negative variables. Only one (MID3) became positive, two were removed (ID36, and ID8). The others remained negative.

Table 136: Discriminant Analysis Results for ND5  
“Adaptation to Cultural Patterns of Thinking/Communicating”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
19	18	-25.300	26.706	.0014	131.453	30	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	Direction
1.	ID38 Spiritual Gifting for Ministry	30.462	1097.400	.760	.0094	P	-
2.	ID24 Language Learning Development	25.557	960.890	.324	.0001		+
3.	MID6 Persistence with Contextual Sensitivity	-22.663	430.110	.373	.0002		-
4.	ID23 Commitment to Personal Intellect.Develop.	21.962	261.700	.079	.0000		+
5.	ID20 Development of Communication Skills	20.356	173.830	.147	.0000		+
6.	ID15 Copability/Flexibility	-16.478	318.130	.174	.0000		-
7.	ID13 Prudence/Discretion	-14.543	481.800	.680	.0049		-
8.	ID26 Development of Confidence	12.743	210.670	.099	.0000		+
9.	ID30 Capacity to Research and Strategize	-12.352	160.750	.046	.0000		-
10.	ID34 Dependence on God	-12.100	121.480	.192	.0000		-
11.	ID40 Godliness of Life Before People	11.987	134.840	.431	.0004		+
12.	ID19 Family Adaptation to Schooling Situation	-11.503	142.200	.031	.0000		+
13.	ID6 Confidence in Personal Skills and Judgement	-11.323	91.954	.287	.0001		-
14.	ID33 Spirit-Controlled Holy Life	9.937	87.898	.051	.0000		+
15.	ID9 Initiative	9.456	22.078	.068	.0000	R	-
16.	MID3 Deliberation/Cautiousness	-9.214	58.618	.012	.0000		-
17.	ID31 Right Relationships/Concern for People	8.092	18.617	.258	.0001		+
18.	ID16 Sociability	7.453	44.488	.034	.0000		+
19.	ID32 Mediation/Peace-Making	-6.912	66.508	.028	.0000		-
20.	ID14 Interpersonal Interest	6.736	84.171	.021	.0000		+
21.	ID10 Perseverance/Diligence	-6.526	26.393	.016	.0000		-
22.	ID12 Emotional Self-Control	5.939	27.604	.059	.0000	R	-
23.	MID1 Interpersonal Skills	5.192	32.450	.010	.0000		+
24.	ID28 Development of Knowledge, Skills, Gifts	-4.878	27.318	.020	.0000		-
25.	ID7 Self-control and Confidence	3.982	10.337	.003	.0000		+
26.	MID2 Disciplined Confidence	3.551	5.595	.002	.0000		+
27.	ID11 Persistence	-3.096	7.777	.111	.0000	R	+
28.	MID5 Personal Life Maintenance	-2.614	5.553	.608	.0025		-
29.	ID29 Ability to Work Harmoniously with Others	2.438	3.403	.001	.0000		+
30.	ID8 Risk-taking/Openness to People&Experienc.	-1.873	2.436	.039	.0000	R	+



Table 137: Discriminant Analysis Results for ND6  
“Involvement with Culture and People”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	17	-28.8377	30.5340	.0011	140.229	25	.0000

Independent (Predictor) Factors		Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID34 Dependence on God	-29.897	2222.400	.665	.0015		-
2.	MID5 Personal Life Maintenance	27.794	816.13	.553	.0003	P	-
3.	ID29 Ability to Work Harmoniously with Others	21.944	920.710	.472	.0001	P	-
4.	ID28 Development of Knowledge, Skills, Gifts	-20.599	785.390	.363	.0000		-
5.	ID30 Capacity to Research and Strategize	19.991	215.320	.299	.0000		+
6.	ID4 Analytical Perceptiveness/Curiosity	-18.739	383.830	.196	.0000		-
7.	MID4 Self-Controlled Tactfulness	11.844	589.360	.247	.0000	P/R	+
8.	ID6 Confidence in Personal Skills and Judgement	-9.525	147.770	.013	.0000		-
9.	ID32 Mediation/Peace-Making	9.434	67.661	.016	.0000		+
10.	ID16 Sociability	9.314	307.280	.153	.0000		+
11.	ID9 Initiative	8.654	112.900	.008	.0000	P/R	+
12.	ID18 Empathy	-7.762	115.400	.024	.0000		-
13.	ID17 Situational Sensitivity	-7.108	176.990	.061	.0000	R	+
14.	ID37 Dealing with Spiritual Realities	-6.967	131.440	.033	.0000		-
15.	ID5 Probity/Respect for Laws and Customs	6.815	26.272	.001	.0000	R	-
16.	ID1 Positive Marital/Family Relationships	-6.267	108.360	.009	.0000	P	+
17.	ID40 Godliness of Life Before People	6.145	59.580	.003	.0000	P	-
18.	MID6 Persistence with Contextual Sensitivity	4.180	29.053	.083	.0000		+
19.	MID3 Deliberation/Cautiousness	4.061	45.368	.104	.0000		+
20.	ID22 Commitment to Learning	-3.927	31.825	.005	.0000	P	+
21.	ID8 Risk-taking/Openness to People&Experienc.	-3.650	55.951	.003	.0000	R	+
22.	ID35 Prayer-Life	-3.594	28.005	.047	.0000		-
23.	ID24 Language Learning Development	2.997	23.633	.004	.0000	P	-
24.	ID33 Spirit-Controlled Holy Life	1.574	3.468	.001	.0000	P	-
25.	ID11 Persistence	-1.027	1.501	.011	.0000	R	+

Table 138: Discriminant Analysis Results for ND7  
“Psychological Acceptance of People and Culture”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
19	18	-2.1573	2.2772	.1615	48.322	17	.0001

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID5	Probity/Respect for Laws and Customs	1.994	23.903	.492	.0023	R	-
2.	MID2	Disciplined Confidence	1.484	27.094	.687	.0057	P	-
3.	ID24	Language Learning Development	-1.387	17.415	.431	.0011		-
4.	ID37	Dealing with Spiritual Realities	1.204	10.527	.302	.0003	P	-
5.	ID27	Changes in Political Opinions	-.913	8.478	.851	.0182		-
6.	ID31	Right Relationships/Concern for People	-.908	7.006	.579	.0033		-
7.	ID32	Mediation/Peace-Making	.868	6.904	.214	.0001		+
8.	ID38	Spiritual Gifting for Ministry	.866	9.013	.616	.0031	P	-
9.	ID18	Empathy	.854	8.481	.335	.0004	P	-
10.	ID14	Interpersonal Interest	-.757	6.556	.271	.0002		-
11.	ID34	Dependence on God	.753	4.767	.243	.0002	P	-
12.	ID6	Confidence in Personal Skills and Judgement	.652	5.271	.528	.0024	P	-
13.	ID4	Analytical Perceptiveness/Curiosity	-.587	2.912	.376	.0005		-
14.	ID22	Commitment to Learning	-.504	2.094	.767	.0111		-
15.	ID3	Positive Interpersonal Attitudes/Interactions	-.449	2.315	.191	.0001	R	+
16.	ID11	Persistence	.419	1.631	.171	.0001	R	-
17.	ID25	Sense of Well-Being with Life and Work	-.352	1.112	.161	.0002		-

Table 139: Discriminant Analysis Results for ND8  
“Skills for Developing Nationals”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	17	-19.998	21.175	.0022	109.971	30	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID31	Right Relationships/Concern for People	30.634	329.530	.785	.0051	P	-
2.	ID20	Development of Communication Skills	-23.973	145.520	.362	.0001		-
3.	ID19	Family Adaptation to Schooling Situation	23.182	246.770	.459	.0003	P	-
4.	ID23	Commitment to Personal Intellect.Develop.	19.357	150.850	.237	.0001	P	-
5.	ID29	Ability to Work Harmoniously with Others	18.145	81.085	.143	.0000		+
6.	MID2	Disciplined Confidence	-17.935	143.190	.170	.0001	P	+



Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
7.	ID39	Dependence on the Holy Spirit	14.989	95.821	.411	.0002		+
8.	ID33	Spirit-Controlled Holy Life	14.825	39.192	.015	.0000		+
9.	ID38	Spiritual Gifting for Ministry	13.922	63.925	.107	.0000		+
10.	ID34	Dependence on God	12.654	81.088	.222	.0001	P	-
11.	ID10	Perseverance/Diligence	-11.665	101.000	.085	.0000	P	+
12.	ID4	Analytical Perceptiveness/Curiosity	-9.444	71.626	.329	.0001	P	+
13.	ID22	Commitment to Learning	7.882	17.090	.008	.0000		+
14.	ID36	Maintenance of Spiritual Life	6.612	49.205	.051	.0000	P	-
15.	MID6	Persistence with Contextual Sensitivity	6.279	19.505	.010	.0000	P	-
16.	ID7	Self-Control and Confidence	5.874	25.746	.012	.0000		+
17.	ID30	Capacity to Research and Strategize	-5.863	14.020	.017	.0000		-
18.	ID37	Dealing with Spiritual Realities	5.711	44.623	.652	.0011	P	-
19.	ID11	Persistence	5.321	13.654	.190	.0002	P/R	+
20.	ID32	Mediation/Peace-Making	-5.002	11.043	.024	.0000		-
21.	ID16	Sociability	-4.973	40.633	.179	.0001		-
22.	ID13	Prudence/Discretion	-4.635	18.049	.208	.0001		-
23.	ID9	Initiative	-3.664	4.813	.003	.0011	P/R	-
24.	ID17	Situational Sensitivity	-3.448	18.213	.032	.0000	R	+
25.	MID4	Self-Controlled Tactfulness	-3.335	7.819	.004	.0003	P/R	-
26.	ID18	Empathy	-3.157	7.556	.271	.0000		-
27.	ID1	Positive Marital/Family Relationships	-1.577	1.924	.002	.0006	R	+
28.	ID6	Confidence in Personal Skills & Judgement	-1.328	2.322	.005	.0001	P	+
29.	ID25	Sense of Well-Being with Life and Work	1.767	2.622	.253	.0000		+
30.	ID40	Godliness of Life Before People	-1.717	3.428	.122	.0000		-

Table 140: Discriminant Analysis Results for ND9<sup>169</sup>  
“Knowledge of Country and Language”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	17	-36.463	38.608	.0007	138.876	28	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID12	Emotional Self-Control	25.773	1374.200	.815	.0099	P/R	+

<sup>169</sup>Spiritual dynamic variables which do not appear to be critical for learning about the country and language but which are associated with ND9 are ID35 Prayer-Life (-28.616), ID32 Mediation/ Peace-Making (27.573), ID38 Spiritual Gifting for Ministry (-19.718), ID33 Spirit-Controlled Holy Life (-15.535), ID36 Maintenance of Spiritual Life (-10.061), ID40 Godliness of Life Before People (8.248), and ID34 Dependence on God (7.638).

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
2.	ID19	Family Adaptation to Schooling Situation	21.589	327.670	.485	.0000	P	-
3.	ID30	Capacity to Research and Strategize	16.667	166.570	.073	.0000		+
4.	ID26	Development of Confidence	16.420	507.490	.239	.0000	P	-
5.	ID29	Ability to Work Harmoniously with Others	-16.304	360.370	.173	.0000		-
6.	ID2	Tactfulness	15.479	372.530	.135	.0000	P/R	+
7.	ID8	Risk-taking/Openness to People&Experienc.	-14.406	239.670	.051	.0000	P/R	-
8.	ID18	Empathy	-12.967	274.110	.064	.0000	P	+
9.	ID14	Interpersonal Interest	10.045	164.310	.020	.0000	P	-
10.	ID4	Analytical Perceptiveness/Curiosity	-8.554	45.922	.088	.0000		-
11.	ID3	Positive Interpersonal Attitudes/Interaction	6.732	34.379	.012	.0000	R	-
12.	ID20	Development of Communication Skills	5.432	27.504	.120	.0000		+
13.	ID10	Perseverance/Diligence	5.263	23.451	.160	.0000	P	-
14.	ID22	Commitment to Learning	4.900	26.817	.007	.0000		+
15.	ID1	Positive Marital/Family Relationships	4.870	27.018	.421	.0000	R	-
16.	MID6	Persistence with Contextual Sensitivity	-4.304	18.518	.149	.0000	P	+
17.	MID4	Self-Controlled Tactfulness	-2.947	11.702	.001	.0000	R	+
18.	ID13	Prudence/Discretion	2.831	18.164	.003	.0000	P	-
19.	ID5	Probity/Respect for Laws and Customs	2.645	5.527	.001	.0000	R	-
20.	ID11	Persistence	-2.534	10.433	.009	.0000	P/R	-
21.	ID6	Confidence in Personal Skills & Judgement	-2.450	14.821	.304	.0000	P	+

Table 141: Discriminant Analysis Results for ND10  
“Conflict Resolution Skills”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	18	-25.3262	25.3262	.0015	127.185	29	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID25	Sense of Well-Being with Life and Work	27.689	544.260	.297	.0001	P	-
2.	ID34	Dependence on God	23.940	713.030	.201	.0004		+
3.	ID14	Interpersonal Interest	-22.594	524.710	.616	.0038		-
4.	ID38	Spiritual Gifting for Ministry	-20.887	525.130	.224	.0003		-
5.	ID5	Probity/Respect for Laws and Customs	15.926	600.510	.563	.0029	P/R	+
6.	ID9	Initiative	15.113	342.310	.323	.0001	P/R	+
7.	ID31	Right Relationships/Concern for People	15.719	261.950	.069	.0000		+
8.	ID13	Prudence/Discretion	-14.964	292.380	.150	.0002		-



9.	ID22	Commitment to Learning	13.845	312.220	.128	.0002		+
10.	MID2	Disciplined Confidence	13.295	259.030	.241	.0003	P	-
11.	ID36	Maintenance of Spiritual Life	-10.831	230.040	.520	.0026		-
12.	ID12	Emotional Self-Control	10.227	297.490	.848	.0189	P/R	+
13.	ID8	Risk-taking/Openness to People&Experienc.	-9.802	196.960	.280	.0002	P/R	-
14.	ID2	Tactfulness	9.664	208.390	.673	.0050	P/R	+
15.	ID1	Positive Marital/Family Relationships	8.979	172.790	.111	.0001	P/R	+
16.	ID7	Self-Control and Confidence	7.790	79.866	.178	.0003	P	-
17.	MID1	Interpersonal Skills	7.737	107.400	.094	.0000		+
18.	ID19	Family Adaptation to Schooling Situation	7.452	56.702	.011	.0000		+
19.	ID10	Perseverance/Diligence	-7.152	65.916	.028	.0000	P	+
20.	ID40	Godliness of Life Before People	7.135	81.742	.475	.0008	P	-
21.	ID23	Commitment to Personal Intellect.Develop.	6.262	30.687	.008	.0000		+
22.	MID5	Personal Life Maintenance	5.716	36.917	.047	.0000	P	-
23.	ID26	Development of Confidence	-3.496	25.574	.415	.0004		-
24.	ID11	Persistence	2.879	16.657	.017	.0000		+
25.	ID6	Confidence in Personal Skills and Judgement	-2.795	10.790	.006	.0000	P	+
26.	MID6	Persistence with Contextual Sensitivity	2.386	9.197	.004	.0000	P	-
27.	ID24	Language Learning Development	-2.071	7.463	.022	.0000		-
28.	ID4	Analytical Perceptiveness/Curiosity	2.010	5.558	.003	.0000	P	-
29.	ID18	Empathy	1.415	4.181	.002	.0000		+

Table 142: Discriminant Analysis Results for ND11  
“Skills in Interpersonal Relationships”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
18	18	-1.435	1.435	.3145	31.809	13	.0026

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	➡
1.	ID27	Changes in Political Opinions	1.261	11.637	.490	.0066	P	-
2.	ID3	Positive Interpersonal Attitudes/Interaction	1.140	14.316	.672	.0128	P/R	+
3.	ID8	Risk-taking/Openness to People&Experienc.	-1.080	11.106	.466	.0081	R	+
4.	ID4	Analytical Perceptiveness/Curiosity	-1.068	11.624	.435	.0082		-
5.	ID40	Godliness of Life Before People	1.004	9.101	.575	.0090	P	-
6.	ID17	Situational Sensitivity	.982	10.264	.622	.0107	P/R	+
7.	ID18	Empathy	.906	5.366	.349	.0042		+
8.	ID39	Dependence on the Holy Spirit	.795	6.678	.396	.0067	P	-

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
9.	ID23	Commitment to Personal Intellect. Develop.	-.781	7.670	.523	.0064		-
10.	ID16	Sociability	.790	7.129	.715	.0122	P	-
11.	ID34	Dependence on God	.612	3.713	.368	.0068		+
12.	ID19	Family Adaptation to Schooling Situation	-.514	2.863	.318	.0038		-
13.	MID4	Self-Controlled Tactfulness	.405	1.371	.301	.0050	R	-

Table 143: Discriminant Analysis Results for ND12  
“Adaptation to Cultural Life-Style”

High N	Low N	High Centroid	Low Centroid	Lambda	$\chi^2$	DF	P-Value
20	18	2.680	-2.978	.1061	61.692	17	.0000

Independent (Predictor) Factors			Coefficient	Partial-F	$\lambda$	P-Value	*	III➡
1.	ID39	Dependence on the Holy Spirit	2.346	40.196	.402	.0001		+
2.	ID13	Prudence/Discretion	-1.934	23.013	.293	.0000	P	+
3.	ID40	Godliness of Life Before People	1.836	38.589	.699	.0019		+
4.	ID12	Emotional Self-Control	1.816	24.709	.523	.0002	R	-
5.	ID15	Copability/Flexibility	1.788	25.962	.265	.0000		+
6.	ID37	Dealing with Spiritual Realities	1.322	13.765	.223	.0000	P	-
7.	MID1	Interpersonal Skills	-1.099	17.803	.595	.0005	P	+
8.	ID2	Tactfulness	-.979	12.631	.197	.0000	P/R	-
9.	ID6	Confidence in Personal Skills and Judgement	-.889	10.015	.156	.0000	P	+
10.	ID17	Situational Sensitivity	.816	9.588	.428	.0001	P/R	-
11.	ID26	Development of Confidence	-.815	4.456	.329	.0001	P	+
12.	ID27	Changes in Political Opinions	-.770	5.998	.176	.0000	P	+
13.	ID14	Interpersonal Interest	.624	3.747	.833	.0108		+
14.	ID22	Commitment to Learning	-.614	3.375	.131	.0000		-
15.	ID3	Positive Interpersonal Attitudes/Interaction	-.493	2.730	.125	.0000	R	+
16.	ID23	Commitment to Personal Intellect. Develop.	.451	2.082	.115	.0000	P	-
17.	ID36	Maintenance of Spiritual Life	.400	1.693	.106	.0000		+

Discriminant analysis resulted in a far more comprehensive and *complex* set of predictor variables for each criterion variable than regression analysis was able to extract. While most sets of predictors had an evenly spaced range of Partial-F’s, a number had one or even two or three clumped together, at greater than twice the distance of the next nearest variable. These extreme predictors, which usually had the highest coefficients (indicating the strength of their relative contribution to each function), also exerted considerable influence on



the other variables. When these extreme predictors were removed from the equation, for example, the total number of predictor variables in all but one set fell, some by as much as half. Most negative variables were either changed to positive or were removed.

It is important in interpreting the predictor/ criteria relationships to keep in mind that while the coefficient indicates the importance of the relative contribution of each predictor, the P-value indicates the viability of the variable. The lower the P-values, the stronger the predictive reliability of the variable. It is also important to note that if the high centroid (the “most competent” group) is positive, predictors that are positive orient to it and negative predictors to the low centorid. However, if the high centroid (the “most competent” group) is negative, then negative predictors orient to it, and positive predictors orient to the low centroid (“least competent” group). In that sense, it is possible for negatives to actually be positive predictors of the most competent group.

Table 144 shows a summary of the results of discriminant analysis as it compares with regression analysis. Discriminant analysis results in more predictors than does regression analysis for two reasons. First, the distinction between top and bottom quartiles is considerably greater than with all together, resulting in more predictors. Secondly, the F-to-enter for regression analysis was considerably higher than for discriminant analysis (3.953 vrs. 1.0). There is not a great deal of difference in the number of times that each predictor variable correlated with dependent variables. There is greater difference in the number of predictors that each dependent variable received (as seen in the scores at the bottom of each column). D7 “Adequate Social Interaction,” D11 “Factual Knowledge of Sociological Structures,” D17 “Insight into Cultural Values and Beliefs,” D27 “Enjoyment of National Recreational Activities,” MD2 “Commitment to Creative/Viable Ministry,” MD4 “Active Acculturation,” ND5 “Adaptation to Cultural Patterns of Thinking and Communicating,” and ND8 “Skills for Developing Nationals” each had over 30 discriminant predictors.

Table 144: Summary of Multiple Regression  
and Discriminate Analysis Findings

All Predictor (Independent) Factors with all Criterion (Dependent) Factors

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D 10	D 11	D 12	D 13	D 14	D 15	D 16
ID1		•			•		•	•				•	R •	R	•	
ID2		•			•		•	•	•	•	R •	•			•	R •
ID3		R •	•	•	R •	•	•	•			•	•			•	
ID4				•		•	•	R	•		R •	R		R •	•	
ID5					R		•		•			•	•			
ID6					•	•	•	•		R •		•		R	•	
ID7		•	•		•		•				•	•	R		•	•
ID8	R	•			•		•	•		R	R •		•			
ID9	•			•	•		R •	•	•						•	•
ID10	•	•		•		•	•		•		•		•			
ID11				•			•	•		•			•		•	
ID12			•	•		•	•			•	•	•				•
ID13		•									•	•	R •	•		R
ID14		•										•	•	•	•	
ID15	•	•	•			•	•	•		•	•	•			•	•
ID16	•		R •				R •		•	•	•				•	•
ID17							R •		•		R •			•		•
ID18	R •	•					•		•		•	•				
ID19	•			•			R •	•			•	•		R		
ID20		•	•	R			•			•		R •			•	•
ID21		•		•	R •		R •				•	•			R •	•
ID22		•	R •	•		R •	R •	•	•					•		•
ID23	•		•	•		•	•	•			•	•	•		•	•
ID24		R •			•	•	•				•	•			R •	
ID25	•	R •	R	•	R •						•	•		•	•	•
ID26		•					•		R	•	•	R •			R •	
ID27				•	•		•	•	•		R •	•				
ID28		•				•		•	R •		•		•	•	•	
ID29	R	R •	•	•			•		R •					R •	R •	
ID30	•										•	•		R •	•	R
ID31	•				•		R •				•		•			
ID32	•	•	•	•		•	•	•			•	•	•		•	
ID33		•				•			•	•	•		•			
ID34			•		•			R		R •	•		R			
ID35				R •	•		•			•	•			•	•	
ID36	•	•	•			•	•		•		•		•	•	R •	
ID37	•			•			R •									•
ID38		•					•		•				•	•		
ID39		•							•		•	•		•		
ID40	•	•		R •			•				•				•	
MID1					•		•	R •		•	•	•		•	•	
MID2	•	•			•	R •	•				•	•		•	•	
MID3					•	R •	•	•	•	•	•	•	•			•
MID4			•	R •	•		•	•		•	•			•	•	
MID5						•			•	•	•					•
MID6	•	•	•				•	R		•	•	•			•	
R- Total	3	4	3	4	4	3	8	4	3	3	5	3	4	6	5	3
D(•)- Total	16	26	14	17	18	16	37	17	18	16	35	26	15	16	28	15

NOTES: R= Multiple Regression predictors. •= Discriminant Analysis predictors. Dependent Factor totals are at the bottom; independent factor totals are at the end of the Table (2 pages over).



Table 144: Summary of Multiple Regression  
and Discriminate Analysis Findings continued

	D 17	D 18	D 19	D 20	D 21	D 22	D 23	D 24	D 25	D 26	D 27	D 28	D 29	D 30	D 31	MD 1	MD 2
ID1	•	R •	•			•	R •				•		•			•	•
ID2			•	R •		•			•	•	•	•	•		•	•	•
ID3	•			R		•					•	•	•			•	•
ID4			•	R		•			•		•			•		•	•
ID5	R •			•	•	•		•	•	•	•			•	•	•	
ID6			•	•	•	•	R					•		•		•	•
ID7	•	•		•		•				•	•	•			•	•	•
ID8		•	R	•			•		•	•	•		•	•			•
ID9	•	•				R •					•	•			•	•	•
ID10		•	•	•		•	•				•	•				•	•
ID11	•	•			•	•		•	•		•	R •	•	•			•
ID12	•	•			•		R		•	•		R •	•	•	•	•	
ID13	•		R •	•		•		•	•	•	•	•			•	•	•
ID14						R		•	•						•	•	
ID15	•		•	•		•					•	•			•		•
ID16	•		•								•	•	•		•	•	•
ID17	•	•	•			•	•	R •			•		•		R	•	•
ID18	•	•		•	•	•		•	•		•		•	•	R •	•	
ID19	•	•	•		•		R •		•		•	R •				•	•
ID20		•				•		•	•			•		R •	R •	•	•
ID21	•		R	R •		•		•			•	•	•		•	•	R
ID22	•	•			R •			R •	•	R •	•		•	•		•	R
ID23	R •				•	•		•	•	•			R •	•	•		•
ID24	R •					•			•		•	•					•
ID25	•	•		•		•		R	•	R	•		R •		•		•
ID26	•			•				•			•		•			•	•
ID27	R •	•						•			•	•	•			•	•
ID28	R •	•		•	•	R •		•	•		•	•				R •	
ID29			R •			•	R	•	•				•		•	•	
ID30	•			•					•			•	•	•		•	•
ID31		•	R			•		•	•	R •	•	•	R •		•	•	•
ID32			•	•			•		•		•				•	•	•
ID33	•		•			•					•		•				•
ID34	•	•	•			•	•	R	•		•						•
ID35	•	R					•				•	•	•	•			•
ID36	•	•		•	•			•			•	•	•	•	•		•
ID37			R •		•	•			•	•	•	•	•	•	•	•	•
ID38	•				•		•	•	•		•	•	R •				•
ID39		•			•		•	•			•			R •			•
ID40		•				•					•						•
MID1	•	•				R •	R •	R •				•	•	R •			R •
MID2	•		•	•		•	R •	R •			•	•	•				•
MID3				R •	•							•	•	•		•	•
MID4	•		•				•		•		•	•	•		•	•	•
MID5	•		•				•				•	•	•			•	R •
MID6	•				•	R •		•		•	•	•		•	•	•	•
R- Total	5	2	6	5	1	5	7	6	0	3	0	3	4	3	3	1	4
D(•)- Total	32	21	18	18	15	29	14	21	24	11	37	29	28	18	19	31	38

NOTES: R= Multiple Regression predictors. •= Discriminant Analysis predictors. Dependent Factor totals are at the bottom; independent factor totals are at the end of the Table (next page).

Table 144: Summary of Multiple Regression and Discriminate Analysis Findings continued

	MD 3	MD 4	ND 1	ND 2	ND 3	ND 4	ND 5	ND 6	ND 7	ND 8	ND 9	ND 10	ND 11	ND 12	R TOTAL	D TOTAL
ID1	•	•		•		•		•		•	•	•			4	23
ID2			•	•	•	•					•	•		•	3	27
ID3	•	•	•	R		•			•		•		•	•	4	25
ID4	•			•	•	•		•	•	•	•	•	•		5	24
ID5		•				•		•	•		R •	R •			4	21
ID6	•	•		•		R •	•	•	•	•	•	•		•	4	25
ID7		•			•		•			•		R •			2	23
ID8	•	•	•			•	•	•			•	•	•		4	24
ID9		R		•			•	•		•	R	•			4	21
ID10	•	•	•	•	•		•			R •	•	•			1	26
ID11		•		•	•		•	•	•	•	•	•			1	26
ID12	•	•		R	•		•				R •	R •		•	5	25
ID13		•	•				•		R	•	•	•		•	4	24
ID14			•	•		•	•		•		•	•		R •	2	17
ID15		•		•		R •	•							•	1	24
ID16	•			•	•	•	•	•		•	R		•		3	24
ID17	•	•	•	•			R	•		•			•	R •	6	23
ID18	•	•		•	•			•	•	•	•	•	•		2	28
ID19		•		•	•		•			•	R •	•	•		5	24
ID20	•	•	•	•	•		•			R •	•				5	24
ID21		•	R •	•	R									R	9	20
ID22	R •	•				•		•	•	•	•	•		•	8	28
ID23	•			•	•		•			•		•	•	•	2	29
ID24	•	•		•	•		•	•	•			•			3	21
ID25	•	•							•	•	R	R •			8	23
ID26	•		R •		•		•				•	•		•	4	20
ID27	•	•		•	•				•				•	•	2	22
ID28	•	•	•	•	•	•	R •	•							5	26
ID29	•			R •		•	•	•		•	•				8	21
ID30	•	•	•	•	•		•	•		•	•				2	22
ID31		R •		R •	•		•		•	R •		•			7	23
ID32	•	•	•		•	•	•	•	•	•	•				0	28
ID33	•		•	R	•		•	•		•					1	18
ID34	R •		•		•		•	R •	•	•		•	•		6	21
ID35	•	•	•	•	R			R •						R	5	19
ID36	•	•		•	•	•				•		•		R •	2	28
ID37		R •		•				•	•	•				•	3	21
ID38		•	•		•		•		•	•		•			1	21
ID39		•		•						•			•	•	1	17
ID40			R •	R •	•	•	•	•		•		•	•	•	3	20
MID1	•	•		R	•		•			R		•		•	8	23
MID2	R			R •	•		•		R •	•		•			6	24
MID3	R •	•	R			•	•								4	21
MID4		•				•				•	•		•		1	24
MID5	•	•		•	•		•	R •				•			2	20
MID6	•	R •			•		R •			•	•	•			4	26
R- Total	4	4	4	8	2	2	3	3	2	4	6	4	0	5		
D(•)- Total	29	34	18	29	27	17	30	22	17	30	21	29	13	17		

NOTES: R= Multiple Regression predictors. •= Discriminant Analysis predictors. Dependent Factor totals are at the bottom; independent factor totals are at the end of the Table.



In order to develop profiles of the “most competent” and “least competent” individuals, a cut-off point of top and bottom 20% was established and analysis of all dependent factor scores made to identify these individuals. It quickly became clear that 1) the data was too complex to easily identify two distinct groups since all subjects had scores in both the top and bottom percentiles on at least a few factors, and 2) there were too many factors for adequate analysis. Further variable reduction through factor analysis of all factors was attempted. However, second-level factors ended up with too much of a mix of distinct categories. These second-level factors were abandoned. Instead, eleven of the first-level factors were chosen on the basis of source (missionary, missionary colleague, and national response) and category (social and interpersonal involvement, acculturation, and ministry skills). *Social and Interpersonal Involvement* included two factors: D6 “Social Interaction” and ND11 “Interpersonal Relationships.” *Acculturation* included four factors: a general factor focused on “Active Acculturation” (MD4) and three looking at specific levels of acculturation, “Understanding of Cultural Ethos” (D12), “Identification with Traditional, Personal, and Interpersonal Values” (D23), and “Adaptation to Cultural Patterns of Thinking and Communicating” (ND5). Finally, *Ministry* looks at top and bottom profiles of skills factors: (D29) “Cultural Involvement and Research Skills,” (D30) “Contextualized Church Development Skills,” (D31) “Change-Agent Skills,” (ND8) “Skills for Developing Nationals,” and (ND4) “Concern for Contextualizing Ministry.”

For these eleven factors Tables 145-154 show variables, variable means, factor loadings, t-tests, and subject’s high and low profiles on eight areas: personal background, culture learning, social tensions, extent of social activities, ministry skills, personal characteristics, spiritual dynamics, and the intensity of problems experienced.

Split-Group Profile Analysis of D6: Social Interaction

Table 145: Split-Group Profile Analysis of D6

		“Social Interaction”						
Variable and Instrument Item #							Var. Mean	Factor Loading
1.	Involvement in enjoyable activities with nationals (Section 6, Part 5, 5)						3.08	.831
2.	Interaction with nationals; national friends (Section 6, Part 5, 2)						3.33	.676
High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
18	1.7354	.757	17	-1.1366	.207	19.67	-15.50	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =4	F =11	20-29= 1	1-4 =7	Mar.NA =15	Sub. =7	Poor= 1	Tense=1	Inc.=15	Y=2
B =6	M = 7	30-39=10	5-9 =3	Mar.Nat.= 0	InCit.=0	Mod=13	OK =10	Exc.=3	
C =2		40-49= 6	10-14 =1	Single = 2	Farm =5	Well= 4	Close=7		
D =3		50-59= 1	15-19 =3	Other = 1	SmTn=6				
E =2		60+ = 0	20-24 =3		Other =0				
F =1			25+ =1						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =3	F = 6	20-29=1	1-4 =5	Mar.NA =16	Sub. =6	Poor= 2	Tense=1	Inc.=12	Y=2
B =2	M =11	30-39=4	5-9 =2	Mar.Nat.= 0	InCit.=2	Mod=12	OK =11	Exc.=5	
C =2		40-49=7	10-14 =3	Single = 1	Farm =3	Well= 3	Close=5		
D =2		50-59=2	15-19 =0	Other = 0	SmTn=5				
E =5		60+ =3	20-24 =3		Other =1				
F =3			25+ =4						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
ChurMin.,MKEd=1	H.S. =17	B.A. =7	Working	Little=5	1&1+=1	No =11	M.W.=0
Ch.Pl,F.Manag.=1	Tech. = 3	B.Sc. =3	on a	Some=6	2&2+=2	Yes=7	Worse=1
Ch.Pl.=2	C.Coll.= 1	B.Th. =0	degree	Full = 3	3&3+=8		Same= 2
Ch.Pl.,Ed.=2	B.Coll.=11	BRE =1	now:		4&4+=5		Better=12
Chr.Ed.=5	1.Sem. =4	M.A. =0	0		5 =2		M.Bet=3
Housewife=1	2 Sem. =2	M.Div.=1					
Lang.Lrn,Ch.Pl=1	1 Univ.=2	M.Th. =1					
Lang.Lrn/Maint=1	2 Univ.=0	MRE. =1					
Theo.Ed.=1		Ph.D. =0					
Theo.Ed.,Admin=2		Other =5					
Wom.Min.,Adm.=1							
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl.=6	H.S. =15	B.A. =8	Working	Little=6	1&1+=2	No =7	M.W.=0
Chr.Ed.=1	Tech. = 1	B.Sc. =2	on a	Some=8	2&2+=1	Yes=10	Worse=0
Counsellor=1	C.Coll.= 1	B.Th. =0	degree	Full = 2	3&3+=10		Same= 8
Evang.,Camp=1	B.Coll.=10	BRE =1	now:		4&4+=3		Better=5
Hsewfe,WomMn=1	1.Sem. =4	M.A. =3	1		5 =1		M.Bet=2
MusicAdmin.=1	2 Sem. =2	M.Div.=3					
Past.,Finance.=1	1 Univ.=4	M.Th. =0					
Past.,YouthMin=1	2 Univ.=4	MRE. =0					
Sec.,Counsel.=1		Ph.D. =0					
Theo.Ed.=2		Other =3					
Transl.,Maint.=1							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 4	N = 4	N = 2	N = 15	N = 10	N = 12	N = 13	N = 13	N = 15
Y = 12	Y = 13	Y = 15	Y = 3	Y = 8	Y = 6	Y = 5	Y = 5	Y = 3
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 13	N = 2	N = 14	N = 7	N = 9	N = 10	N = 16	N = 12
Y = 9	Y = 4	Y = 14	Y = 3	Y = 10	Y = 8	Y = 7	Y = 1	Y = 5



Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =3	0 =1	0 =5	0 =11	0 =3	0 =1	0 =3	Hardly =1	LessMn=1	Uncert.=2
1-4=7	1-4=4	1-4=7	1-4=5	1-4=5	1-4=3	1-4=3	Some =0	1X Mn =4	Surviv.=0
5-8=6	5-8=4	5-8=1	5-8=0	5-8=4	5-8=4	5-8=1	Quite =9	1X Wk =7	U.Dev.=4
9+=1	9+=8	9+=4	9+=0	9+=5	9+=10	9+=9	Great =6	Daily =5	A.Dev.=11
							Compl.=1		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =2	0 =5	0 =11	0 =6	0 =2	0 =3	Hardly =2	LessMn=1	Uncert.=0
1-4=11	1-4=3	1-4=5	1-4=1	1-4=1	1-4=6	1-4=6	Some =4	1X Mn =6	Surviv.=1
5-8=2	5-8=3	5-8=2	5-8=0	5-8=1	5-8=1	5-8=1	Quite =8	1X Wk =7	U.Dev.=4
9+=0	9+=6	9+=2	9+=1	9+=5	9+=6	9+=4	Great =3	Daily =3	A.Dev.=10
							Compl.=0		H.Dev.=1

Ministry Skills

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =1	Little =1	Little =2	Little =1	Little =2	Little =1
Some =5	Some =6	Some =5	Some =3	Some =9	Some =11	Some =7
Well =8	Well =4	Well =8	Well =6	Well =6	Well =4	Well =7
V.Well =2	V.Well =5	V.Well =3	V.Well =6	V.Well =1	V.Well =1	V.Well =3
Teach =3	Teach =2	Teach =1	Teach =1	Teach =1	Teach =0	Teach =0
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =2	Little =0
Some =5	Some =5	Some =5	Some =1	Some =7	Some =11	Some =8
Well =5	Well =5	Well =4	Well =11	Well =7	Well =2	Well =7
V.Well =1	V.Well =5	V.Well =5	V.Well =3	V.Well =3	V.Well =1	V.Well =1
Teach =6	Teach =2	Teach =3	Teach =2	Teach =0	Teach =1	Teach =1

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=3	St.D=0	St.D=0
D. =1	D. =4	D. =11	D. =12	D. =4	D. =6	D. =3	D. =8	D. =6	D. =4
N.O=2	N.O=2	N.O=0	N.O=2	N.O=3	N.O=4	N.O=5	N.O=1	N.O=2	N.O=4
Ag. =12	Ag. =12	Ag. =7	Ag. =4	Ag. =7	Ag. =7	Ag. =9	Ag. =5	Ag. =8	Ag. =9
StA.=2	StA.=0	StA.=0	StA.=0	StA.=4	StA.=1	StA.=0	StA.=1	StA.=2	StA.=1
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=2	St.D=1	St.D=0	St.D=1	St.D=0	St.D=1	St.D=0	St.D=0
D. =2	D. =0	D. =11	D. =14	D. =4	D. =10	D. =7	D. =9	D. =6	D. =4
N.O=4	N.O=3	N.O=0	N.O=1	N.O=2	N.O=0	N.O=1	N.O=1	N.O=2	N.O=4
Ag. =10	Ag. =13	Ag. =4	Ag. =1	Ag. =9	Ag. =6	Ag. =8	Ag. =4	Ag. =7	Ag. =8
StA.=1	StA.=1	StA.=0	StA.=0	StA.=2	StA.=0	StA.=1	StA.=1	StA.=2	StA.=1

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=1	Rare=0	5 =3	?? =0	?? =0	?? =1	?? =2	?? =3
Occ.=2	Occ. =3	D>V=4	Occ.=2	15 =6	No =4	No =1	No =0	No =0	No =5
Gen.=14	Mst=12	D/V=13	Gen.=16	30 =7	Yes=14	Part =9	Part =8	Part =6	Yes=10
Con=2	Con.=3	D<V=0	Con=0	60 =0		Most=8	Most=9	Mst=10	
		C.Vic=0		60+=2					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =1	?? =0	?? =0	?? =0	?? =3
Occ.=1	Occ. =4	D>V=2	Occ.=0	15 =6	No =1	No =1	No =0	No =0	No =7
Gen.=10	Most=9	D/V=13	Gen.=17	30 =9	Yes=15	Part =9	Part =10	Part =7	Yes=7
Con=6	Con.=4	D<V=2	Con=0	60 =0		Most=7	Most=7	Mst=10	
		C.Vic=0		60+=1					

Intensity Levels of Problem Areas<sup>170</sup>

High									
8	17	18	19	22	26	28	29	30	35
Rare=5	Rare=4	Rare=3	Rare=4	Rare=2	Rare=0	Rare=3	Rare=7	Rare=3	Rare=5
Som=6	Som=7	Som=9	Som=7	Som=6	Som=6	Som=8	Som=3	Som=5	Som=6
Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =0	Oft =1	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=2	Freq=1	Freq=2	Freq=3	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
8	17	18	19	22	26	28	29	30	35
Rare=10	Rare=10	Rare=10	Rare=9	Rare=5	Rare=7	Rare=6	Rare=6	Rare=7	Rare=7
Som=7	Som=2	Som=3	Som=3	Som=8	Som=2	Som=6	Som=4	Som=3	Som=3
Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =2	Oft =2	Oft =3	Oft =2	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=1	Freq=0	Freq=2
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>171</sup>

High									
36	37	50	51	52	56	57	58	60	62
Rare=6	Rare=8	Rare=5	Rare=6	Rare=5	Rare=9	Rare=8	Rare=6	Rare=5	Rare=6
Som=2	Som=3	Som=5	Som=6	Som=7	Som=4	Som=4	Som=7	Som=4	Som=2
Oft =1	Oft =0	Oft =1	Oft =0	Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =3
Freq=3	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=2	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>170</sup>Since there were 94 problem areas only those that showed up with significant difference between high and low groups were included here. The title numbers correspond to the question numbers in Section 7 of the main questionnaire. 8="Need for recreation/sports facilities," 17="Understanding cultural customs and manners, 18="Understanding cultural values and ideals," 19="Communication patterns and channels," 22="Understanding local politics," 24="Understanding non-verbal communication behaviour," 26="Organizing and analyzing cultural facts," 28="Learning to understand behavioural motivations," 29="Accepting cultural aesthetics," and 30="Internalizing cultural values."

<sup>171</sup>35="Understanding functional values of social and cultural activities," 36="Lack of contact with missionaries," 37="Too much contact with missionaries," 50="Quality and extent of social life," 51="Extent and quality of friendships with nationals," 52="Extent and quality of friendships with one's own countrymen," 56="Lack of motivation," 57="Lack of direction from mission leaders," 58="Poor work habits," 60="Insufficient Training to Do Work."



Low									
36	37	50	51	52	56	57	58	60	62
Rare=11	Rare=7	Rare=10	Rar=11	Rare=10	Rare=8	Rare=10	Rare=9	Rare=10	Rare=11
Som=2	Som=2	Som=2	Som=3	Som=3	Som=3	Som=1	Som=3	Som=4	Som=1
Oft =0	Oft =2	Oft =1	Oft =1	Oft =0	Oft =1	Oft =1	Oft =1	Oft =0	Oft =0
Freq=0	Freq=2	Freq=0	Freq=0	Freq=0	Freq=2	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>172</sup>

High									
63	64	65	73	74	76	78	82	85	90
Rare=2	Rare=4	Rare=1	Rare=4	Rare=5	Rare=5	Rare=5	Rare=1	Rare=7	Rare=3
Som=8	Som=5	Som=10	Som=0	Som=6	Som=3	Som=8	Som=8	Som=3	Som=6
Oft =3	Oft =3	Oft =1	Oft =0	Oft =0	Oft =2	Oft =0	Oft =2	Oft =2	Oft =1
Freq=1	Freq=1	Freq=2	Freq=0	Freq=0	Freq=1	Freq=0	Freq=2	Freq=1	Freq=2
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1
Low									
63	64	65	73	74	76	78	82	85	90
Rare=7	Rare=8	Rare=3	Rare=6	Rare=9	Rare=10	Rare=8	Rare=10	Rare=10	Rare=6
Som=5	Som=4	Som=5	Som=0	Som=2	Som=3	Som=2	Som=1	Som=3	Som=3
Oft =2	Oft =2	Oft =3	Oft =1	Oft =3	Oft =1	Oft =3	Oft =1	Oft =1	Oft =0
Freq=0	Freq=0	Freq=3	Freq=1	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

The focus of this factor is on social interaction of missionaries with nationals, that is, the extent of their *self-assessed* involvement in enjoyable activities with nationals and the extent to which they have made friends with nationals. With a t-value of 15.50 (DF=19.67) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p<.05$ . Standard deviation is highest in the “high group,” the low group showing greatest uniformity. Observations that follow indicate general group trends.

There are nearly twice as many women as men in the high group but half as many in the low group (indicating women more than twice as likely to be strong on social interaction). Compared to the total number per age bracket, the most socially interactive group is the 30-39 year olds. Proportionally, the least socially interactive are those in their third term (10-14 years on the field) and sixth term (25+ years). Marital status, family relations, child-hood context, present work, schooling and degrees, and desire for personal development seem to make very little difference between the two groups.

Those in the high group are more proficient in language and twice as likely to have clear goals for on-going language learning than those in the lower group. They are also more likely to perceive their status as higher than in their own culture. However, they

<sup>172</sup>63=“Balancing time in all areas of life,” 64=“Effective daily schedule,” 65=“Insufficient leisure time,” 73=“Ability to do ethnographic study,” 74=“Preparing creative and culturally fitting gospel presentations,” 76=“Effective follow-up and discipleship,” 78=Analyzing and resolving cross-cultural conflict,” 82=“Personal depression,” 85=“Fear for family security,” and 90=“Handling stress of extreme local poverty.”

tend to have more tensions with nationals over status than does the lower group. The higher group is more willing to take the time to learn culture and language than the lower group, and nearly three times as likely to have a national mentor. They perceive themselves as more involved in enjoyable activities with national friends, and are considerably more actively involved in local seasonal functions, family-related events, community social events, political activities, religious events (outside their immediate ministry), recreational activities, and public social events. However, they do not visit in national home any more often than do those in the lower group, and both groups had the same number who had or had not made close friends. Both had the same development of problem-solving skills for handling tensions and conflicts.

While these findings are to be expected, the surprise comes in the difference between the two groups on ministry skills, personal and spiritual characteristics, and the level of difficulty they have with problems. The high group had a weaker self-perception on level of biblical and theological knowledge and the ability to apply this knowledge to the ministry, on development of gifts and skills for the task, the ability to work harmoniously with others, and the ability to assess the cultural, religious, and political context in which they work. Both are equally low in research and planning skills.

While both are uniformly high in curiosity, perseverance, tactfulness, sociability, and ability to empathize, the high group is stronger only on risk-taking. They are somewhat less likely to be flexible, are twice as likely to lack confidence, and are more prone to letting others take the initiative. They also showed themselves *slightly* less likely to have evangelistic burden and tend to struggle somewhat more with self-control and with the quality of their thought life, motives, and actions. They did rate higher on gentleness and gracious confidence in dealing with others out of trust in God's sovereignty, in their spiritual walk, and in experiencing spiritual "warfare." Both groups were the same on experiencing the correlation of gifts and ministry, the empowering of the Holy Spirit for ministry, and the fruit of the Spirit in daily life.

The two groups differ on the extent to which various aspects of life and ministry are problems. The higher group felt greater need for recreation. Either because of or in spite of their greater social involvement in the culture and willingness to learn from national mentors, they perceived themselves to have more problems understanding cultural customs, manners, values, ideals, communication patterns and channels, and local politics. They expressed greater problems in organizing and analyzing cultural facts, understanding behavioural motivations, internalizing cultural values, and understanding the functional values of the social and cultural activities which they more readily attended. In line with their greater language aptitude they did have less trouble understanding and



using non-verbal communication and had less trouble with analyzing and resolving cross-cultural conflicts.

Being socially-minded they were less satisfied with the quality and extent of their social life, their friendships with nationals, missionaries, and with others of their own countrymen than was the bottom group. They expressed less of a problem with motivation than did the low group, but more problem with lack of direction, advice, counsel, and evaluation by leadership, poor work habits, and a sense of insufficient training for the task. They also had more trouble balancing time in all areas of life and maintaining an effective schedule. Emotionally, they expressed much greater likelihood to experience personal depression, to fear for family security, and to experience greater stress from local poverty.

**Split-Group Profile Analysis of ND11: “ Skills in Interpersonal Relationships”**

**Table 146: Split-Group Profile Analysis of ND11**

<b>“Skills in Interpersonal Relationships”</b>			
<i>Variable and Instrument Item #</i>		<i>Var. Mean</i>	<i>Factor Loading</i>
1.	Understands religious beliefs of the people (Q.3)	3.81	.673
2.	Works well with national church leaders (Q.15)	4.19	.593
3.	Has joking and teasing relationships with nationals (Q.12)	4.16	.518
4.	Has national friends; interacts well with nationals (Q.18)	4.17	.421

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
14	1.928	.698	14	-1.935	.613	23.92	-17.24	.000

**Personal Background**

<b>High</b>									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =6	F =7	20-29=1	1-4 =2	Mar.NA =14	Sub. =2	Poor= 2	Tense=1	Inc.=12	Y=3
B =0	M =7	30-39=7	5-9 =5	Mar.Nat.= 0	InCit.=1	Mod=7	OK = 7	Exc.=2	
C =1		40-49=1	10-14 =0	Single = 0	Farm =5	Well= 5	Close=5		
D =2		50-59=5	15-19 =2	Other = 0	SmTn=5				
E =4		60+ =0	20-24 =2		Other =1				
F =1			25+ =3						
<b>Low</b>									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =4	F =6	20-29=1	1-4 =2	Mar.NA =14	Sub. =5	Poor= 1	Tense=3	Inc.=10	Y=5
B =1	M =8	30-39=5	5-9 =1	Mar.Nat.= 0	InCit.=0	Mod=9	OK = 3	Exc.=4	
C =2		40-49=6	10-14 =4	Single = 0	Farm =0	Well= 4	Close=8		
D =5		50-59=1	15-19 =1	Other = 0	SmTn=4				
E =1		60+ =1	20-24 =4		Other =5				
F =1			25+ =2						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Min.,MKEd=1	H.S. =13	B.A. =6	Working on a degree now: 1	Little=2	1&1+=2	No =7	M.W.=0
Ch.Pl.=3	Tech. = 3	B.Sc. =2		Some=10	2&2+=1	Yes=7	Worse=0
Ch.Pl, Theo.Ed.=1	C.Coll.= 0	B.Th. =0		Full = 2	3&3+=5		Same= 5
Ch.Pl.,Chr.Ed.=1	B.Coll.= 6	BRE =2			4&4+=4		Better= 6
Chr.Ed.=1	1.Sem. =1	M.A. =0			5 =2		M.Bet=2
Housewife=3	2 Sem. =4	M.Div.=4					
Theo.Ed.=3	1 Univ.=4	M.Th. =2					
Theo.Ed.,Admin=1	2 Univ.=0	MRE. =2					
		Ph.D. =0					
		Other =3					
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl,F.Manag.=1	H.S. =14	B.A. =4	Working on a degree now: 1	Little=6	1&1+=0	No =7	M.W.=0
Ch.Pl.=4	Tech. = 1	B.Sc. =0		Some=5	2&2+=2	Yes=7	Worse=0
Ch.Pl.,Hsewife=1	C.Coll.= 0	B.Th. =1		Full = 3	3&3+=6		Same= 4
Ch.Pl.,Chr.Ed=1	B.Coll.= 9	BRE =0			4&4+=5		Better= 5
Chr.Ed.,Ch.Pl.=1	1.Sem. =3	M.A. =0			5 =1		M.Bet=4
Chr.Ed.,Med.=1	2 Sem. =2	M.Div.=1					
Chr.Ed.,W.Min=1	1 Univ.=2	M.Th. =1					
Hsewife,Ling.=1	2 Univ.=1	MRE. =0					
Theo.Admin.=1		Ph.D. =0					
Theo.Ed.=1		Other =5					
Transl,Maint.=1							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 6	N = 6	N = 4	N = 12	N =11	N = 8	N = 9	N = 10	N = 11
Y = 7	Y = 8	Y = 10	Y = 2	Y = 3	Y = 6	Y = 5	Y = 4	Y = 3
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 6	N = 3	N = 2	N = 13	N = 10	N = 10	N = 10	N = 12	N = 11
Y = 8	Y = 11	Y = 12	Y = 1	Y = 4	Y = 4	Y = 4	Y = 2	Y = 3

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =3	0 =1	0 =5	0 =11	0 =4	0 =3	0 =4	Hardly =1	LessMn=3	Uncert.=2
1-4=6	1-4=4	1-4=2	1-4=0	1-4=3	1-4=2	1-4=2	Some =3	1X Mn =2	Surviv.=0
5-8=3	5-8=4	5-8=1	5-8=0	5-8=3	5-8=3	5-8=2	Quite =5	1X Wk =6	U.Dev.=2
9+=0	9+=3	9+=3	9+=0	9+=3	9+=6	9+=1	Great =4	Daily =3	A.Dev.=10
							Compl.=1		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =3	0 =7	0 =3	0 =0	0 =2	Hardly =1	LessMn=0	Uncert.=3
1-4=7	1-4=3	1-4=5	1-4=2	1-4=5	1-4=2	1-4=5	Some =3	1X Mn =1	Surviv.=0
5-8=2	5-8=2	5-8=2	5-8=1	5-8=0	5-8=1	5-8=1	Quite =6	1X Wk =7	U.Dev.=1
9+=2	9+=6	9+=2	9+=0	9+=4	9+=8	9+=4	Great =3	Daily =5	A.Dev.=7
							Compl.=0		H.Dev.=2



Ministry Skills

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =1	Little =1	Little =1	Little =1	Little =2	Little =1
Some =2	Some =5	Some =5	Some =0	Some =5	Some =8	Some =4
Well =5	Well =3	Well =3	Well =6	Well =5	Well =3	Well =5
V.Well =2	V.Well =3	V.Well =3	V.Well =4	V.Well =2	V.Well =0	V.Well =3
Teach =4	Teach =2	Teach =2	Teach =3	Teach =1	Teach =1	Teach =1
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =1	Little =0
Some =2	Some =6	Some =2	Some =0	Some =5	Some =7	Some =5
Well =7	Well =2	Well =9	Well =8	Well =5	Well =4	Well =5
V.Well =3	V.Well =3	V.Well =1	V.Well =4	V.Well =3	V.Well =1	V.Well =2
Teach =2	Teach =3	Teach =2	Teach =2	Teach =1	Teach =1	Teach =2

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=0	St.D=0	St.D=2	St.D=0	St.D=0
D. =1	D. =3	D. =8	D. =9	D. =5	D. =6	D. =5	D. =6	D. =5	D. =0
N.O=2	N.O=1	N.O=0	N.O=1	N.O=1	N.O=3	N.O=4	N.O=1	N.O=1	N.O=3
Ag. =10	Ag. =10	Ag. =5	Ag. =3	Ag. =6	Ag. =4	Ag. =4	Ag. =5	Ag. =7	Ag. =11
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=1	StA.=0	StA.=0	StA.=1	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=2	St.D=1	St.D=0	St.D=1	St.D=0	St.D=2	St.D=0	St.D=0
D. =2	D. =4	D. =6	D. =8	D. =1	D. =7	D. =6	D. =9	D. =3	D. =2
N.O=2	N.O=0	N.O=2	N.O=1	N.O=1	N.O=1	N.O=3	N.O=1	N.O=1	N.O=2
Ag. =9	Ag. =10	Ag. =4	Ag. =4	Ag. =9	Ag. =5	Ag. =5	Ag. =2	Ag. =9	Ag. =10
StA.=1	StA.=0	StA.=0	StA.=0	StA.=3	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=1	Rare=0	5 =1	?? =0	?? =0	?? =1	?? =0	?? =1
Occ.=1	Occ. =2	D>V=1	Occ.=0	15 =6	No =2	No =1	No =0	No =0	No =7
Gen.=12	Gen=10	D/V=12	Gen.=13	30 =7	Yes=12	Part =4	Part =6	Part =6	Yes=6
Con=1	Con.=2	D<V=0	Con=1	60 =0		Most=9	Most=7	Most=8	
		C.Vic=0		60+=0					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =0	?? =0	?? =0	?? =0	?? =2
Occ.=1	Occ. =4	D>V=1	Occ.=0	15 =6	No =1	No =1	No =0	No =0	No =3
Gen.=10	Gen= 6	D/V=12	Gen.=14	30 =3	Yes=13	Part =1	Part =3	Part =5	Yes=9
Con=3	Con.=4	D<V=1	Con=0	60 =3		Mst.=12	Mst.=11	Mst.=9	
		C.Vic=0		60+=1					

Intensity Levels of Problem Areas<sup>173</sup>

High									
10	12	14	15	16	17	18	19	22	23
Rare=7	Rare=3	Rare=9	Rare=6	Rare=5	Rare=7	Rare=8	Rare=5	Rare=2	Rare=5
Som=1	Som=5	Som=2	Som=5	Som=4	Som=3	Som=3	Som=5	Som=3	Som=3
Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =2	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
10	12	14	15	16	17	18	19	22	23
Rare=3	Rare=4	Rare=4	Rare=3	Rare=5	Rare=5	Rare=6	Rare=8	Rare=4	Rare=5
Som=4	Som=2	Som=2	Som=3	Som=4	Som=4	Som=3	Som=2	Som=5	Som=4
Oft =0	Oft =2	Oft =2	Oft =5	Oft =1	Oft =3	Oft =1	Oft =1	Oft =1	Oft =1
Freq=0	Freq=1	Freq=1	Freq=1	Freq=2	Freq=0	Freq=2	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=2	Alw=0

Intensity Levels of Problem Areas Con't<sup>174</sup>

High									
25	29	38	39	40	55	56	58	62	63
Rare=6	Rare=5	Rare=9	Rare=9	Rare=4	Rare=4	Rare=10	Rare=7	Rare=7	Rare=3
Som=4	Som=4	Som=1	Som=1	Som=6	Som=6	Som=1	Som=4	Som=0	Som=7
Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1
Freq=1	Freq=1	Freq=1	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=1	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
25	29	38	39	40	55	56	58	62	63
Rare=5	Rare=5	Rare=10	Rare=9	Rare=5	Rare=5	Rare=7	Rare=5	Rare=7	Rare=5
Som=1	Som=4	Som=1	Som=0	Som=2	Som=3	Som=4	Som=7	Som=1	Som=2
Oft =0	Oft =1	Oft =0	Oft =0	Oft =1	Oft =1	Oft =0	Oft =1	Oft =4	Oft =5
Freq=0	Freq=2	Freq=0	Freq=2	Freq=3	Freq=2	Freq=1	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>175</sup>

High									
64	65	72	73	74	77	78	79	81	82
Rare=4	Rare=3	Rare=4	Rare=2	Rare=6	Rare=9	Rare=9	Rare=6	Rare=8	Rare=4
Som=6	Som=6	Som=2	Som=1	Som=2	Som=2	Som=1	Som=1	Som=2	Som=3
Oft =1	Oft =2	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =2
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>173</sup>10="Problems with sleeping patterns," 12="Need for privacy," 14="Understanding how nationals act with me," 15="Understanding the way nationals think," 16="Cultural worldview and philosophy," 17="Understanding cultural customs and manners, 18="Understanding cultural values and ideals," 19= Communication patterns and channels," 22="Understanding local politics," and 23="Understanding national and public social functions."

<sup>174</sup>25="Problems finding a national mentor," 29="Accepting cultural aesthetics," 38="Lack of contact with nationals," 39="Too much contact with missionaries," 40="Relationships with Team-Members," 55="Proper balance of time spent with nationals and with the family," 56="Lack of motivation," 58="Poor work habits," 62="Lack of evaluation, advice, and counsel," and 63="Balancing time in all areas of life."

<sup>175</sup>64="Effective daily schedule," 65="Insufficient leisure time," 72="Demographic study," 73="Ability to do ethnographic study," 74="Preparing creative and culturally fitting gospel presentations," 77="Working in teams," 78=Analyzing and resolving cross-cultural conflict," 79="Planning and implementing church-planting," 81="How and when to express anger," and 82="Personal depression."



Low									
64	65	72	73	74	77	78	79	81	82
Rare=4	Rare=3	Rare=3	Rare=4	Rare=4	Rare=6	Rare=3	Rare=5	Rare=6	Rare=5
Som=4	Som=4	Som=5	Som=2	Som=5	Som=2	Som=6	Som=4	Som=4	Som=4
Oft =3	Oft =0	Oft =1	Oft =2	Oft =2	Oft =3	Oft =1	Oft =1	Oft =1	Oft =2
Freq=2	Freq=5	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0

Intensity Levels of Problem Areas Con't<sup>176</sup>

High				
85	87	90	92	93
Rare=11	Rare=5	Rare=4	Rare=5	Rare=6
Som=0	Som=6	Som=5	Som=6	Som=3
Oft =0	Oft =0	Oft =2	Oft =0	Oft =2
Freq=0	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low				
85	87	90	92	93
Rare=6	Rare=4	Rare=6	Rare=6	Rare=7
Som=2	Som=4	Som=4	Som=3	Som=2
Oft =3	Oft =2	Oft =2	Oft =2	Oft =0
Freq=1	Freq=2	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=1	Alw=1	Alw=2

The focus of this factor is on relationships with nationals--understanding their beliefs and values, working well with them, and having joking- and teasing-level friendships/ relationships with them. The results of this factor are based on *national observation*. With a t-value of 17.24 (DF-23.92) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at p<.05. Standard deviation is highest in the "low group," the high group showing nearly three times as much uniformity. Observations that follow indicate general group trends.

Men and women are equally represented in both groups. Two age groups are significantly under-represented in the high group: the 40-49 age-group and the 60+ age-group. The higher group is also more likely to come from farm and small-town backgrounds with good family relationships. However, a background of close family relationships does not necessarily qualify for skills in cross-cultural interpersonal relationships, since the low group included a higher number from close-relationship families as well as more from tense-relationship families.

There is little difference between the two groups on types of ministry, educational background and degrees, present study, language proficiency, on-going language goals, and perceived present status. Nor is there any difference on willingness to take all the time necessary to learn the language and culture or with the number who have and have

<sup>176</sup>85="Fear for family security," 87="Discontent with fellow missionaries," 90="Handling stress of extreme local poverty," 92="Physical burnout," and 93="Emotional burnout."

not made close national friends. Level of tensions with nationals over inter-personal relationships, organizational issues, church structure and function, aesthetics, status, and theological issues are also fairly evenly represented by both groups. In fact, the higher group indicated less use of national mentors for learning language and culture.

Surprisingly, the higher group is less likely to be involved in social activities, rating less involvement in local seasonal functions, family-related events, political activities, recreational activities, and public social events. Only in community social events did the higher group rate slightly higher. The higher group also identified less involvement in daily and weekly visits in national homes. However, the higher group perceived themselves engaging to a higher extent in *enjoyable activities* with national friends.<sup>177</sup>

Both groups rated by nationals came out the same on curiosity/interest in alternative points of view (high), risk-taking (both low), perseverance (half high/half low), flexibility (most in both groups high), confidence (high), initiative (half high/half low), sociability in work (slightly more high than low in both groups), and empathy (both high). Only in copability and tactfulness did the two groups differ. The higher group had an even number of those who claimed difficulty in coping with many situations in the past while the lower group had more who claimed such difficulty. The higher group included half who were frank and half who were tactful, while the lower group was strong on tactfulness. This may indicate that perhaps nationals care less about tactfulness than about the depth and genuineness of friendship. Finally, the higher group rated less on all the spiritual dynamics, except for self-control.

There is greater difference between the two groups on self-perceived levels of difficulties with various areas of life and ministry. The top group had fewer who were troubled by erratic sleeping patterns and by lack of privacy. They appear to have less trouble understand how nationals act with missionaries and how they think, especially their worldview and philosophy. They find it easier to understand their manners and customs, cultural values and ideals, and local politics. There is little difference between the two groups on problems associated with organizing and analyzing cultural facts, understanding patterns which explain behaviour and motivation, initiating relationships with nationals and initiating social behaviour, or in understanding the functional value of

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<sup>177</sup> This could be the answer to the apparent conundrum of little difference between the two groups. It is possible that the higher group is higher because they enjoy friendship with nationals for the sake of friendship more than for the sake of ministry, and because their involvement with nationals was more in tune with their culture because of a greater knowledge of or intuitive understanding of their culture.



social and cultural events. However, the higher group does have more problems with understanding communication patterns and channels.

There is little difference between the two groups on difficulties with levels of contact with missionaries, but the higher group feels that contact with nationals is too little while the bottom group tended to feel contact is too much. There is little difference between the two groups on quality and extent of their social life and relationships with national friends and missionaries. The higher group has less problem balancing time spent with nationals and with family, tends to be more highly motivated, have better work habits, and feel less need for evaluation, counsel, and guidance from leaders. Their daily schedules are more effectively maintained and they have less concern over lack of leisure time. In terms of ministry skill problems, they have less problem analyzing and resolving cross-cultural conflict and less trouble doing demographic and ethnographic study, creative evangelism, and church-planting than does the bottom group. Emotionally, the higher group has less problem with knowing how and when to express anger, with depression, with fear for family security, with discontent with fellow missionaries, with stresses caused by local poverty, with physical burnout, and with emotional burn-out.

The conclusion that can be drawn from this is that the one group was rated more highly by nationals than the other on the basis of the *quality* of their friendships and relationships rather than on the *quantity* of the same or on levels of competence in other areas of life. This quality would appear to be based on a better knowledge of the culture, an innate ability to relate to the culture and to people, and to a happier, more balanced personality and life-style that is attractive to others.

Split-Group Profile Analysis of MD4: “Active Acculturation”

Table 147: Split-Group Profile Analysis of MD4

“Active Acculturation”			
Variable and Instrument Item #		Var. Mean	Factor Loading
1.	This person very Brazilian in ways of thinking and doing (Q.17)	2.86	.972
2.	Interacts with Brazilians in many situations; Brazilian friends (Q.15)	3.89	.498

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
16	1.514	.474	18	-1.523	.437	36.88	-19.34	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =6	F =7	20-29= 0	1-4 =3	Mar.NA =12	Sub. =1	Poor= 1	Tense=0	Inc.=10	Y=4
B =2	M =9	30-39=2	5-9 =0	Mar.Nat.= 0	InCit.=1	Mod=7	OK = 8	Exc.=6	
C =2		40-49=8	10-14 =2	Single = 4	Farm =2	Well= 7	Close=8		
D =2		50-59=5	15-19 =2	Other = 0	SmTn=8				
E =4		60+ =1	20-24 =4		Other =4				
F =0			25+ =5						

Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A=6	F =8	20-29=1	1-4 =8	Mar.NA =17	Sub. =3	Poor= 1	Tense=1	Inc.=14	Y=4
B=3	M=10	30-39=13	5-9 =2	Mar.Nat.= 0	InCit.=0	Mod=13	OK =11	Exc.=4	
C=0		40-49=4	10-14 =2	Single = 1	Farm =7	Well= 4	Close=6		
D=7		50-59=3	15-19=2	Other = 0	SmTn=5				
E=2		60+ =0	20-24=2		Other=2				
F=0			25+ =2						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Admin.=2	H.S. =15	B.A. =8	Working	Little=3	1&1+=1	No =3	M.W.=0
Ch.Develop.=1	Tech. = 1	B.Sc. =3	on a	Some=4	2&2+=1	Yes=13	Worse=1
Ch.Pl, Theo.Ed.=1	C.Coll.= 1	B.Th. =1	degree	Full = 9	3&3+=3		Same= 3
Ch.Pl.,Chr.Ed.=1	B.Coll.=9	BRE =0	now:		4&4+=5		Better=9
Ch.Pl.,Med.,Lit=1	1.Sem. =4	M.A. =0	2		5 =6		M.Bet=3
Ch.Pl.Admin.=1	2 Sem. =4	M.Div.=4					
Chr.Ed,Counsel=1	1 Univ.=5	M.Th. =1					
Chr.Ed.,Dorm=1	2 Univ.=2	MRE. =1					
Chr.Ed.,W.Min=2		Ph.D. =1					
Counsellor=1		Other =5					
Lang.Lrn,Maint=1							
Th.Ed.,Pastoral=1							
Theo.Ed.=2							

Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl.=8	H.S. =18	B.A. =10	Working	Little=3	1&1+=2	No =11	M.W.=0
Ch.Pl.,Ed.=1	Tech. = 2	B.Sc. =2	on a	Some=11	2&2+=4	Yes=7	Worse=0
Ch.Pl,Hsewife=1	C.Coll.= 0	B.Th. =0	degree	Full = 4	3&3+=8		Same= 4
Ch.Pl./Liter.=1	B.Coll.=11	BRE =1	now:		4&4+=4		Better=9
Chr.Ed.,Music=1	1.Sem. =4	M.A. =0	1		5 =0		M.Bet=4
Chr.Ed.,Med.=1	2 Sem. =3	M.Div.=4					
Lang.Lrn/Maint=1	1 Univ.=6	M.Th. =1					
Lang.Lrn/Med.=1	2 Univ.=0	MRE. =2					
Past.,YouthMin=1		Ph.D. =0					
Theo.Ed.=2		Other =5					

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 5	N = 4	N = 0	N = 15	N = 11	N = 10	N = 13	N = 13	N = 14
Y = 10	Y = 11	Y = 16	Y = 1	Y = 5	Y = 5	Y = 3	Y = 3	Y = 2
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 9	N = 8	N = 5	N = 12	N = 9	N = 12	N = 11	N = 13	N = 15
Y = 7	Y = 9	Y = 13	Y = 6	Y = 9	Y = 6	Y = 7	Y = 5	Y = 3

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =5	0 =10	0 =3	0 =0	0 =2	Hardly =0	LessMn=0	Uncert.=0
1-4=5	1-4=1	1-4=4	1-4=4	1-4=3	1-4=5	1-4=5	Some =2	1X Mn =5	Surviv.=0
5-8=9	5-8=6	5-8=3	5-8=0	5-8=3	5-8=2	5-8=3	Quite =2	1X Wk =6	U.Dev.=1
9+=1	9+=8	9+=2	9+=0	9+=6	9+=8	9+=5	Great =7	Daily =4	A.Dev.=7
							Compl.=5		H.Dev.=5



Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =3	0 =1	0 =5	0 =14	0 =3	0 =1	0 =6	Hardly =0	LessMn=1	Uncert.=2
1-4=10	1-4=5	1-4=6	1-4=1	1-4=4	1-4=3	1-4=2	Some =5	1X Mn =2	Surviv.=1
5-8=2	5-8=2	5-8=3	5-8=0	5-8=3	5-8=5	5-8=2	Quite =8	1X Wk =8	U.Dev.=6
9+=0	9+=7	9+=1	9+=0	9+=5	9+=7	9+=4	Great =3	Daily =4	A.Dev.=8
							Compl.=0		H.Dev.=0

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =0	Little =0	Little =1	Little =0
Some =2	Some =5	Some =3	Some =2	Some =6	Some =9	Some =6
Well =5	Well =3	Well =2	Well =2	Well =3	Well =2	Well =2
V.Well =2	V.Well =3	V.Well =3	V.Well =4	V.Well =5	V.Well =1	V.Well =4
Teach =7	Teach =5	Teach =7	Teach =8	Teach =2	Teach =3	Teach =4
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =3	Little =0
Some =5	Some =8	Some =4	Some =2	Some =7	Some =8	Some =6
Well =6	Well =2	Well =9	Well =9	Well =6	Well =5	Well =3
V.Well =3	V.Well =5	V.Well =3	V.Well =5	V.Well =4	V.Well =1	V.Well =7
Teach =4	Teach =3	Teach =2	Teach =2	Teach =1	Teach =1	Teach =2

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=5	St.D=2	St.D=0	St.D=1	St.D=0	St.D=4	St.D=0	St.D=0
D. =3	D. =4	D. =8	D. =7	D. =7	D. =10	D. =8	D. =8	D. =3	D. =2
N.O=0	N.O=1	N.O=0	N.O=1	N.O=0	N.O=1	N.O=1	N.O=1	N.O=2	N.O=2
Ag. =12	Ag. =10	Ag. =3	Ag. =6	Ag. =7	Ag. =4	Ag. =7	Ag. =3	Ag. =8	Ag. =12
StA.=0	StA.=1	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=1	St.D=2	St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=0
D. =2	D. =3	D. =10	D. =9	D. =6	D. =8	D. =7	D. =11	D. =10	D. =3
N.O=3	N.O=3	N.O=3	N.O=2	N.O=0	N.O=3	N.O=2	N.O=0	N.O=1	N.O=4
Ag. =12	Ag. =11	Ag. =4	Ag. =5	Ag. =10	Ag. =7	Ag. =8	Ag. =5	Ag. =5	Ag. =10
StA.=0	StA.=1	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=2	StA.=1

Intensity Levels of Problem Areas<sup>178</sup>

High									
3	8	12	13	16	24	25	28	29	30
Rare=5	Rare=6	Rare=6	Rare=7	Rare=9	Rare=11	Rare=8	Rare=7	Rare=6	Rare=6
Som=3	Som=3	Som=5	Som=4	Som=4	Som=1	Som=1	Som=3	Som=3	Som=4
Oft =2	Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1	Oft =0
Freq=2	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=2	Freq=1
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>178</sup>3="Personal security," 8="Need for recreation/sports facilities," 12="Need for privacy," 13="Understanding how nationals interact with each other," 16="Cultural worldview and philosophy," 24="Understanding non-verbal communication behaviour," 25="Problems finding a national mentor," 28="Learning to understand behavioural motivations," 29="Accepting cultural aesthetics," and 30="Internalizing cultural values."

Low									
3	8	12	13	16	24	25	28	29	30
Rare=7	Rare=4	Rare=8	Rare=4	Rare=3	Rare=5	Rare=5	Rare=3	Rare=3	Rare=2
Som=3	Som=6	Som=2	Som=9	Som=5	Som=4	Som=5	Som=8	Som=5	Som=4
Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =2	Oft =1	Oft =1	Oft =2	Oft =2
Freq=2	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>179</sup>

High									
32	33	34	36	38	50	51	63	65	66
Rare=10	Rare=8	Rare=7	Rare=13	Rare=11	Rare=11	Rare=12	Rare=4	Rare=6	Rare=10
Som=2	Som=2	Som=4	Som=0	Som=1	Som=3	Som=1	Som=4	Som=3	Som=1
Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =5	Oft =2	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=4	Freq=0
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
32	33	34	36	38	50	51	63	65	66
Rare=5	Rare=5	Rare=5	Rare=6	Rare=6	Rare=3	Rare=8	Rare=6	Rare=6	Rare=7
Som=7	Som=5	Som=3	Som=4	Som=5	Som=7	Som=4	Som=5	Som=5	Som=3
Oft =0	Oft =1	Oft =2	Oft =1	Oft =0	Oft =0	Oft =1	Oft =2	Oft =1	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>180</sup>

High									
72	73	75	77	79	81	90	92	93	94
Rare=3	Rare=2	Rare=6	Rare=13	Rare=8	Rare=10	Rare=5	Rare=5	Rare=8	Rare=8
Som=6	Som=4	Som=5	Som=1	Som=1	Som=1	Som=2	Som=5	Som=2	Som=2
Oft =0	Oft =1	Oft =1	Oft =0	Oft =1	Oft =1	Oft =4	Oft =0	Oft =0	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=1	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=1	Alw=0	Alw=1	Alw=1	Alw=1
Low									
72	73	75	77	79	81	90	92	93	94
Rare=5	Rare=4	Rare=6	Rare=8	Rare=5	Rare=5	Rare=3	Rare=6	Rare=6	Rare=8
Som=2	Som=1	Som=1	Som=4	Som=4	Som=4	Som=7	Som=5	Som=4	Som=3
Oft =1	Oft =0	Oft =1	Oft =1	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=2	Freq=0	Freq=1	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

This factor is based on assessments made by *missionary colleagues* on the subjects of the study from two variables: 1) the extent to which the subject is Brazilian in ways of thinking and doing and 2) the extent of interaction with Brazilians in many life situations. With a t-value of 19.34 (DF=36.88) the t-test confirms that distinctions between the high

<sup>179</sup>32="Initiating relationships," 33="Initiating social behaviour," 34="Involvement in social functions," 36="Lack of contact with missionaries," 38="Lack of contact with nationals," 50="Quality and extent of social life," 51="Extent and quality of friendships with nationals," 63="Balancing time in all areas of life," 65="Insufficient leisure time," and 66="Politicking' in the mission."

<sup>180</sup>72="Demographic study for effective planning," 73="Ability to do ethnographic study," 75="Preparation and use of culturally useable visual aids," 77="Working in teams," 79="Planning and implementing church-planting," 81="How and when to express anger," 90="Handling stress of extreme local poverty," 92="Physical burnout," 93="Emotional burnout," and 94="Spiritual burnout."



and low groups are highly significant, with a null-hypothesis that can be rejected at  $p < .05$ . Standard deviation is relatively low and nearly the same in both groups. Observations that follow indicate general group trends.

Men and women are nearly even represented in both high and low groups. Not surprisingly, the 20-29 yr. age bracket and first term (1-4 yrs) are low but the 30-39 yr. and second term (5-9 yrs) are disproportionately low, the second term showing 0. The number jumps significantly in the 40-49 yr. bracket, but only grows significantly by the fifth and sixth terms (20-24 and 25+ yrs.). This indicates that adequate acculturation takes considerable time. Even having been raised as a "Missionary Kid" (MK) in the intercultural context does not necessarily increase chances of acculturating. There were as many MK's in the low group as in the high!

There are three times as many who identified their main or primary ministry as "church planters" in the low group as in the high, possibly because many of these are still in their earlier years of ministry. There is little difference between the two groups on schooling and degrees, though the high group tends to take twice as much advantage of study and personal development opportunities offered by the mission than the low group. The high group is also much more proficient in the language than the low, and has twice as many with on-going language learning goals. The high group is more likely to take the time needed to learn culture and language, to use national mentors, and to make national friends. They are also much less likely to have tensions with national believers in inter-personal relationships and over issues such as organizational matters, status, and cultural aesthetics, such as art, music, ritual, etc.

The high group also showed themselves more involved in enjoyable activities with national friends, and in local seasonal functions, family-related events, political curiosity, recreational activities, and public social events. While they do not visit in national home any more often than do those in the lower group, they indicated that they had more highly developed problem-solving skills for handling tensions and conflicts.

The high group indicated stronger development of all the ministry skills: biblical and theological knowledge, the ability to apply this knowledge to ministry, development of gifts and skills for the task, the ability to work harmoniously with others, the ability to assess the cultural, religious, and political context in which they work, and research and planning skills. While both groups showed considerable uniformity in curiosity (high), risk-taking (low) perseverance (high), flexibility (high), copability (half and half), initiative (half and half), tactfulness (high), and ability to empathize (high), the high group tended to be twice as strong in confidence and sociability in work.

The high group has slightly less problem with understanding cultural customs and manners, values and ideals, communication patterns and channels, and local politics. They also have less problem in getting involved in social and public functions, learning from nationals, understanding and anticipating behavioural motivations, initiating relationships with nationals, internalizing cultural values, and understanding/using non-verbal communication behaviour. They tend to have stronger inter-personal skills, relating well with ministry team-members, nationals, and other expatriates, effectively analyzing and resolving cross-cultural conflict, balancing time in all relationships and areas of life and ministry (including appropriate leisure-time), and experiencing less anxiety than the bottom group in initiating relationships with people.

However, emotionally, they have more problem with knowing how and when to express anger, deal with internal stresses caused by local poverty, handle lack of privacy, and deal with fears for personal and family security. They are more likely to experience physical, emotional, and spiritual burnout. Ministry skills such as demographic and ethnographic study, creating effective visual aids, doing effective follow-up and church-planting are also more of a problem than with the bottom group.

Split-Group Profile Analysis of D12: “ Understanding of Cultural Ethos”

Table 148: Split-Group Profile Analysis of D12

“Understanding of Cultural Ethos”						Var.	Factor
Variable and Instrument Item #						Mean	Loading
1.	...	how art, lit., and music express needs and longings of the people (Q.4)				2.75	.991
2.	...	connection between how children socialized and adult behaviour (Q.3)				3.38	.864
3.	...	how rituals fit patterns of beliefs (Q.5)				3.08	.840
4.	...	how oral and written traditions fit to form cultural “truths” (Q.1)				3.00	.746
5.	...	how patterns of religious thought impact life of the people (Q.2)				3.52	.714
6.	...	communication and relationships in kinship patterns (Q.6)				3.14	.710

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
19	1.869	.786	18	-2.068	.780	34.00	-15.09	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =6	F =10	20-29= 3	1-4 =7	Mar.NA =16	Sub. =3	Poor= 3	Tense=1	Inc.=16	Y=6
B =2	M =9	30-39=5	5-9 =1	Mar.Nat.= 1	InCit.=2	Mod=10	OK =8	Exc.=3	
C =3		40-49=3	10-14 =0	Single = 2	Farm =4	Well= 5	Close=9		
D =4		50-59=6	15-19 =3	Other = 0	SmTn=7				
E =3		60+ =2	20-24 =1		Other =2				
F =1			25+ =7						



Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =7	F =6	20-29= 1	1-4 =6	Mar.NA =16	Sub. =4	Poor= 2	Tense=2	Inc.=15	Y=4
B =2	M =12	30-39=8	5-9 =2	Mar.Nat.= 0	InCit.=2	Mod=12	OK =7	Exc.=3	
C =0		40-49=3	10-14 =2	Single = 2	Farm =6	Well= 3	Close=9		
D =6		50-59=4	15-19 =0	Other = 0	SmTn=4				
E =3		60+ =2	20-24 =3		Other =2				
F =0			25+ =5						

Personal Background Con't

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl=5	H.S. =17	B.A. =6	Working	Little=7	1&1+=0	No =6	M.W.=0
Chr.Ed,Counsel=1	Tech. = 3	B.Sc. =3	on a	Some=6	2&2+=1	Yes=13	Worse=1
Chr.Ed.,Admin.=1	C.Coll.= 1	B.Th. =0	degree	Full = 6	3&3+=7		Same= 3
Chr.Ed.,Dorm=1	B.Coll.=14	BRE =1	now:		4&4+=7		Better=9
Chr.Ed.,W.Min=1	1.Sem. =1	M.A. =0	1		5 =4		M.Bet=3
Chr.Ed..Music=1	2 Sem. =1	M.Div.=0					
Evang.,Camp=1	1 Univ.=4	M.Th. =0					
Evang.,Music=1	2 Univ.=0	MRE. =0					
Housewife=2		Ph.D. =1					
Music,Chr.Ed.=1		Other =1					
Th.Ed.,Ch.Pl.=1							
Th.Ed.,Pastoral=1							
Th.Ed.,Wom.Mn=1							
Theo.Ed.=1							
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Bkstr.,Ch.Wk.=1	H.S. =16	B.A. =9	Working	Little=6	1&1+=3	No =12	M.W.=0
Church Dev.=1	Tech. = 0	B.Sc. =3	on a	Some=10	2&2+=5	Yes=5	Worse=0
Ch.Pl.=5	C.Coll.= 0	B.Th. =1	degree	Full = 2	3&3+=6		Same= 7
Ch.Pl.,Transl.=1	B.Coll.=9	BRE =1	now:		4&4+=3		Better=9
Ch.Pl./Liter.=1	1.Sem. =5	M.A. =0	1		5 =1		M.Bet=1
Chr.Ed.=2	2 Sem. =6	M.Div.=5					
Housewife=1	1 Univ.=9	M.Th. =3					
Med., Lang.Lrn=1	2 Univ.=0	MRE. =1					
Th.Admin.=1		Ph.D. =1					
Theo.Ed.=2		Other =4					
Theo.Ed.,Admin=1							
Transl,Maint.=1							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 7	N = 7	N = 4	N = 17	N = 15	N = 15	N = 16	N = 18	N = 14
Y = 11	Y = 11	Y = 15	Y = 2	Y = 4	Y = 4	Y = 2	Y = 1	Y = 5
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 10	N = 9	N = 7	N = 14	N = 8	N = 11	N = 10	N = 14	N = 14
Y = 7	Y = 8	Y = 11	Y = 4	Y = 10	Y = 7	Y = 8	Y = 4	Y = 4

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =3	0 =0	0 =3	0 =12	0 =4	0 =1	0 =2	Hardly =0	LessMn=2	Uncert.=3
1-4=7	1-4=3	1-4=8	1-4=1	1-4=3	1-4=3	1-4=6	Some =7	1X Mn =3	Surviv.=0
5-8=4	5-8=6	5-8=3	5-8=1	5-8=4	5-8=6	5-8=2	Quite =2	1X Wk =7	U.Dev.=1
9+=1	9+=7	9+=2	9+=0	9+=5	9+=5	9+=3	Great =8	Daily =7	A.Dev.=10
							Compl.=2		H.Dev.=1
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =4	0 =4	0 =6	0 =11	0 =4	0 =3	0 =7	Hardly =1	LessMn=2	Uncert.=4
1-4=9	1-4=3	1-4=5	1-4=4	1-4=4	1-4=5	1-4=2	Some =6	1X Mn =5	Surviv.=1
5-8=3	5-8=2	5-8=3	5-8=1	5-8=2	5-8=2	5-8=1	Quite =6	1X Wk =9	U.Dev.=4
9+=1	9+=8	9+=3	9+=0	9+=6	9+=8	9+=6	Great =4	Daily =0	A.Dev.=7
							Compl.=0		H.Dev.=2

Ministry Skills

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =1	Little =1	Little =2	Little =0
Some =3	Some =6	Some =7	Some =4	Some =6	Some =12	Some =8
Well =8	Well =4	Well =1	Well =7	Well =8	Well =3	Well =7
V.Well =2	V.Well =5	V.Well =5	V.Well =6	V.Well =2	V.Well =1	V.Well =3
Teach =6	Teach =4	Teach =5	Teach =1	Teach =2	Teach =1	Teach =1
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =1	Little =1	Little =1	Little =2	Little =4	Little =2
Some =8	Some =8	Some =3	Some =2	Some =6	Some =11	Some =7
Well =4	Well =3	Well =9	Well =8	Well =6	Well =1	Well =4
V.Well =0	V.Well =3	V.Well =3	V.Well =5	V.Well =3	V.Well =1	V.Well =4
Teach =6	Teach =3	Teach =2	Teach =2	Teach =1	Teach =1	Teach =1

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=2	St.D=0	St.D=0
D. =4	D. =4	D. =13	D. =8	D. =9	D. =10	D. =4	D. =9	D. =5	D. =1
N.O=0	N.O=2	N.O=0	N.O=2	N.O=0	N.O=4	N.O=3	N.O=1	N.O=3	N.O=3
Ag. =14	Ag. =13	Ag. =6	Ag. =9	Ag. =8	Ag. =3	Ag. =11	Ag. =5	Ag. =10	Ag. =14
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=2	St.D=1	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0
D. =1	D. =2	D. =7	D. =13	D. =1	D. =5	D. =6	D. =13	D. =9	D. =2
N.O=2	N.O=1	N.O=2	N.O=2	N.O=4	N.O=2	N.O=4	N.O=0	N.O=0	N.O=5
Ag. =14	Ag. =14	Ag. =7	Ag. =2	Ag. =12	Ag. =10	Ag. =8	Ag. =4	Ag. =8	Ag. =11
StA.=0	StA.=1	StA.=0	StA.=0	StA.=1	StA.=1	StA.=0	StA.=0	StA.=1	StA.=0

Split-group profile analysis of factor D12 assesses differences between high and low groups on cognitive acculturation in understanding cultural ethos: the extent to which one has knowledge on how art, literature, and music express the needs and longings of the people, how socialization of children relates to adult behaviour, how rituals fit patterns of beliefs, how oral and written traditions fit to form cultural truths, how patterns of religious



thought impact the life of the people, and how communication and relationships occur in kinship patterns. It must be remembered that subjects responded on the basis of *self-perceived* understanding. There was no objective test. With a t-value of -15.09 (DF-34) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p < .05$ . Standard deviation is of equal uniformity in both groups. Observations that follow indicate general group trends.

The high group had equal male/female representation though the low group had twice as many men as women. The age groups were balanced, though first term (1-4 yrs.) and sixth term (25+ yrs.) were disproportionately high in both high and low groups. First-termers in the high group may have over-rated their knowledge (one of the problems of a subjective test of this sort). It is not surprising that there should be a high representation of with 25+ years on the field in the high group, but to have nearly the same number of seasoned missionaries in the low group should be unusual! For the number of sixth-termers on the field, the number in the low group was disproportionately high. Again, there are nearly the same number of MK's in both groups. Of the MK's in the low group, one is in the second-term, two are in their third term, and the fourth is in the fifth term.

There are nearly equal representations in both groups from those who identify "church planting" and Christian education/theological education as their main or primary ministry. The higher group is more represented by Bible College graduates while the lower group is more represented by Seminary graduates. Both groups are nearly evenly represented in degrees, including Ph.D's, although the lower group has all the seminary degrees (M.Div., M.Th., and M.R.E.).

The higher group has considerably higher language proficiency and twice as many who identify on-going language-learning goals. They also are more willing to take the time needed to learn language and culture, to use national mentors, and to have national friends. They also have considerably less tension with nationals in inter-personal relationships, and over such issues as organizational matters, church forms and practice, cultural aesthetics, and status. The higher group perceives themselves to be much more involved with national friends in enjoyable activities, and visit in national homes more often, especially in family social activities and religious events. They are nearly the same as the lower group in other social activities, except for recreational and everyday public events, where the lower group identified more involvement.

Both groups are the same in ministry skills, although the higher group was higher in ability to apply biblical and theological knowledge to the ministry situation as well as in the development of gifts and skills needed for ministry. While both groups showed

uniformity in curiosity (high), risk-taking (low), and ability to empathize (high), the high group tended to be twice as strong in perseverance, have twice as many who are flexible and confident, and stronger in initiative and sociability at work.

Split-Group Profile Analysis of D23: “ Identification with Traditional, Personal, and Interpersonal Values”

Table 149: Split-Group Profile Analysis of D23

“Identification with Traditional, Personal, and Interpersonal Values”									
Variable and Instrument Item #							Var. Mean	Factor Loading	
1.	Identification with values of the culture arising from traditions (Q.7)						2.91	.859	
2.	Identification with values of the culture related to honour and self-respect (Q.6)						2.95	.723	
3.	Identification with social patterns of inter-personal relationship (Q.8)						3.23	.453	

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
18	1.476	.484	19	-1.502	.390	34.44	-20.89	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =9	F =9	20-29= 0	1-4 =6	Mar.NA =17	Sub. =4	Poor= 3	Tense=1	Inc.=13	Y=3
B =3	M =9	30-39=9	5-9 =2	Mar.Nat.= 0	InCit.=1	Mod=12	OK =9	Exc.=5	
C =1		40-49=4	10-14 =1	Single = 1	Farm =4	Well= 3	Close=8		
D =2		50-59=5	15-19 =2	Other = 0	SmTn=7				
E =1		60+ =0	20-24 =4		Other =2				
F =2			25+ =3						

Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =5	F =10	20-29= 1	1-4 =3	Mar.NA =16	Sub. =4	Poor= 2	Tense=3	Inc.=11	Y=1
B =3	M =9	30-39=5	5-9 =4	Mar.Nat.= 0	InCit.=2	Mod=15	OK =10	Exc.=8	
C =2		40-49=3	10-14 =0	Single = 1	Farm =3	Well= 2	Close=5		
D =4		50-59=6	15-19 =1	Other = 0	SmTn=9				
E =3		60+ =4	20-24 =2		Other =1				
F =2			25+ =9						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Min.,MKEd=1	H.S. =17	B.A. =10	Working	Little=7	1&1+=2	No =9	M.W.=0
Ch.Pl.=6	Tech. = 0	B.Sc. =2	on a	Some=8	2&2+=3	Yes=9	Worse=1
Ch.Pl, Theo.Ed.=1	C.Coll.= 1	B.Th. =0	degree	Full = 2	3&3+=4		Same= 6
Ch.Pl.,Dorm=1	B.Coll.=12	BRE =1	now:		4&4+=7		Better=10
Ch.Pl.,Ed.=1	1.Sem. =4	M.A. =0	1		5 =2		M.Bet=1
Chr.Ed.=2	2 Sem. =2	M.Div.=2					
Chr.Ed.,W.Min.=1	1 Univ.=3	M.Th. =2					
Chr.Ed..Music=1	2 Univ.=1	MRE. =0					
Evang.,Music=1		Ph.D. =0					
Music,Chr.Ed.=1		Other =4					
Theo.Ed.,Admin=1							
Transl,Maint.=1							



Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Develop.=1	H.S. =17	B.A. =4	Working on a degree now: 3	Little=6	1&1+=1	No =10	M.W.=0
Ch.Pl.=1	Tech. = 4	B.Sc. =4		Some=8	2&2+=1	Yes=9	Worse=0
Ch.Pl.,Chr.Ed.=1	C.Coll.= 0	B.Th. =1		Full = 3	3&3+=9		Same= 3
Ch.Pl.,Hsewife=1	B.Coll.=10	BRE =0			4&4+=7		Better=11
Chr.Ed.,W.Min=1	1.Sem. =2	M.A. =0			5 =1		M.Bet=3
Ed.,Soc.Min=1	2 Sem. =3	M.Div.=2					
Ev.,Lit.,Maint.=1	1 Univ.=5	M.Th. =1					
Evang.,Camp=1	2 Univ.=0	MRE. =0					
Housewife=2		Ph.D. =1					
Lang.St./Maint=1		Other =2					
Lit.,Med.,Evang=1							
Pastor,Fin.Man.=1							
Pastor,YouthMin=1							
Sec.,Counsel.=1							
Teach,Admin.=1							
Th.Admin.=1							
Theo.Ed.=2							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 9	N = 10	N = 5	N = 17	N = 14	N = 10	N = 11	N = 13	N = 14
Y = 8	Y = 8	Y = 13	Y = 1	Y = 4	Y = 8	Y = 7	Y = 5	Y = 4
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 10	N = 9	N = 2	N = 16	N = 10	N = 12	N = 8	N = 14	N = 14
Y = 9	Y = 10	Y = 17	Y = 3	Y = 8	Y = 7	Y = 11	Y = 5	Y = 5

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =0	0 =2	0 =12	0 =4	0 =0	0 =1	Hardly =0	LessMn=0	Uncert.=2
1-4=10	1-4=5	1-4=5	1-4=2	1-4=2	1-4=4	1-4=3	Some =4	1X Mn =3	Surviv.=1
5-8=4	5-8=3	5-8=4	5-8=0	5-8=3	5-8=0	5-8=5	Quite =10	1X Wk =12	U.Dev.=4
9+=1	9+=8	9+=5	9+=1	9+=7	9+=11	9+=5	Great =1	Daily =2	A.Dev.=11
							Compl.=2		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =4	0 =2	0 =7	0 =15	0 =3	0 =3	0 =7	Hardly =3	LessMn=2	Uncert.=4
1-4=8	1-4=4	1-4=7	1-4=2	1-4=4	1-4=4	1-4=5	Some =5	1X Mn =2	Surviv.=2
5-8=4	5-8=6	5-8=2	5-8=0	5-8=2	5-8=7	5-8=1	Quite =3	1X Wk =8	U.Dev.=2
9+=1	9+=7	9+=0	9+=0	9+=8	9+=5	9+=3	Great =7	Daily =6	A.Dev.=8
							Compl.=0		H.Dev.=2

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =0	Little =0
Some =4	Some =11	Some =6	Some =1	Some =12	Some =14	Some =10
Well =9	Well =2	Well =10	Well =10	Well =4	Well =2	Well =4
V.Well =2	V.Well =4	V.Well =2	V.Well =5	V.Well =2	V.Well =2	V.Well =4
Teach =2	Teach =1	Teach =0	Teach =2	Teach =0	Teach =0	Teach =0

Low							
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan	
Little =0	Little =1	Little =1	Little =2	Little =1	Little =4	Little =1	
Some =4	Some =6	Some =5	Some =1	Some =8	Some =12	Some =8	
Well =8	Well =6	Well =4	Well =10	Well =8	Well =3	Well =7	
V.Well =4	V.Well =5	V.Well =6	V.Well =4	V.Well =1	V.Well =0	V.Well =3	
Teach =3	Teach =1	Teach =3	Teach =2	Teach =1	Teach =0	Teach =0	

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=1	St.D=0	St.D=0
D. =3	D. =4	D. =9	D. =13	D. =5	D. =6	D. =5	D. =14	D. =4	D. =2
N.O=2	N.O=0	N.O=1	N.O=1	N.O=0	N.O=3	N.O=5	N.O=1	N.O=0	N.O=3
Ag. =13	Ag. =14	Ag. =8	Ag. =4	Ag. =12	Ag. =8	Ag. =8	Ag. =1	Ag. =14	Ag. =13
StA.=0	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=2	St.D=0	St.D=0	St.D=1	St.D=0	St.D=2	St.D=0	St.D=0
D. =1	D. =3	D. =12	D. =11	D. =5	D. =15	D. =5	D. =8	D. =9	D. =3
N.O=5	N.O=0	N.O=1	N.O=3	N.O=2	N.O=1	N.O=4	N.O=1	N.O=0	N.O=2
Ag. =12	Ag. =16	Ag. =4	Ag. =5	Ag. =10	Ag. =2	Ag. =10	Ag. =6	Ag. =9	Ag. =14
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=1	StA.=0	StA.=1	StA.=1	StA.=0

Intensity Levels of Problem Areas<sup>181</sup>

High									
12	13	14	15	16	17	18	22	23	24
Rare=5	Rare=10	Rare=10	Rare=8	Rare=10	Rare=7	Rare=6	Rare=4	Rare=6	Rare=8
Som=2	Som=3	Som=2	Som=4	Som=2	Som=4	Som=6	Som=7	Som=3	Som=3
Oft =0	Oft =0	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
12	13	14	15	16	17	18	22	23	24
Rare=9	Rare=5	Rare=7	Rare=4	Rare=5	Rare=7	Rare=9	Rare=3	Rare=7	Rare=7
Som=7	Som=11	Som=10	Som=12	Som=9	Som=10	Som=8	Som=8	Som=6	Som=7
Oft =1	Oft =2	Oft =1	Oft =3	Oft =1	Oft =1	Oft =1	Oft =4	Oft =3	Oft =4
Freq=0	Freq=0	Freq=0	Freq=0	Freq=2	Freq=1	Freq=1	Freq=1	Freq=1	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>181</sup> 12="Need for privacy," 13="Understanding how nationals interact with each other," 14="Understanding how nationals act with me," 15="Understanding the way nationals think," 16="Cultural worldview and philosophy," 17="Understanding cultural customs and manners," 18="Understanding cultural values and ideals," 22="Understanding local politics," 23="Understanding national and public social functions," and 24="Understanding non-verbal communication behaviour."



Intensity Levels of Problem Areas Con't<sup>182</sup>

High									
27	29	30	31	32	33	34	35	37	38
Rare=6	Rare=7	Rare=4	Rare=6	Rare=10	Rare=8	Rare=6	Rare=5	Rare=9	Rare=10
Som=3	Som=4	Som=5	Som=4	Som=2	Som=4	Som=3	Som=4	Som=0	Som=1
Oft =1	Oft =1	Oft =1	Oft =1	Oft =0	Oft =0	Oft =1	Oft =1	Oft =0	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0
Low									
27	29	30	31	32	33	34	35	37	38
Rare=7	Rare=5	Rare=6	Rare=6	Rare=7	Rare=6	Rare=5	Rare=4	Rare=14	Rare=10
Som=5	Som=8	Som=6	Som=7	Som=9	Som=7	Som=5	Som=11	Som=1	Som=4
Oft =2	Oft =0	Oft =2	Oft =2	Oft =0	Oft =1	Oft =2	Oft =1	Oft =2	Oft =2
Freq=1	Freq=3	Freq=2	Freq=1	Freq=1	Freq=1	Freq=1	Freq=1	Freq=1	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>183</sup>

High									
40	53	55	60	62	64	65	69	77	79
Rare=7	Rare=8	Rare=6	Rare=7	Rare=8	Rare=2	Rare=4	Rare=4	Rare=9	Rare=8
Som=3	Som=1	Som=3	Som=1	Som=1	Som=8	Som=4	Som=6	Som=1	Som=3
Oft =0	Oft =0	Oft =1	Oft =2	Oft =0	Oft =2	Oft =3	Oft =2	Oft =1	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
40	53	55	60	62	64	65	69	77	79
Rare=9	Rare=11	Rare=9	Rare=7	Rare=12	Rare=6	Rare=1	Rare=6	Rare=10	Rare=4
Som=5	Som=4	Som=7	Som=8	Som=3	Som=5	Som=12	Som=6	Som=7	Som=6
Oft =2	Oft =1	Oft =1	Oft =1	Oft =1	Oft =5	Oft =3	Oft =4	Oft =0	Oft =2
Freq=0	Freq=1	Freq=0	Freq=1	Freq=1	Freq=1	Freq=1	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>184</sup>

High						
80	81	83	87	88	90	93
Rare=8	Rare=6	Rare=9	Rare=7	Rare=8	Rare=6	Rare=7
Som=1	Som=5	Som=2	Som=4	Som=2	Som=5	Som=3
Oft =1	Oft =1	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1
Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>182</sup>27="Understanding cultural patterns explaining behaviour," 29="Accepting cultural aesthetics," 30="Internalizing cultural values," 31="Internalizing behaviours," 32="Initiating relationships," 33="Initiating social behaviour," 34="Involvement in social functions," 35="Understanding functional values of social and cultural activities," 37="Too much contact with missionaries," and 38="Lack of contact with nationals."

<sup>183</sup>40="Relationships with Team-Members," 53="Personal independence experienced," 55="Proper balance of time spent with nationals and with the family," 60="Insufficient Training to Do Work," 62="Lack of evaluation, advice, and counsel," 64="Effective daily schedule," 65="Insufficient leisure time," 69="Maintaining devotional habits," 77="Working in teams," and 79="Planning and implementing church-planting."

<sup>184</sup>80="Discovering and using resources for ministry," 81="How and when to express anger," 83="Anxiety in initiating relationships with nationals," 87="Discontent with fellow missionaries," 88="Discontent with mission leadership," 90="Handling stress of extreme local poverty," and 93="Emotional burnout."

Low						
80	81	83	87	88	90	93
Rare=4	Rare=8	Rare=11	Rare=7	Rare=9	Rare=3	Rare=5
Som=8	Som=9	Som=3	Som=7	Som=3	Som=12	Som=8
Oft =0	Oft =0	Oft =0	Oft =1	Oft =1	Oft =1	Oft =1
Freq=1	Freq=0	Freq=1	Freq=1	Freq=1	Freq=1	Freq=0
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0

Split-group profile analysis of factor D23 assesses *self-perceived* differences between high and low groups on *affective* acculturation in identifying with traditional values arising from traditions of the culture and cultural values related to honour and self-respect as well as identification with social patterns of interpersonal relationships. With a t-value of -20.89 (DF=34.44) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p < .01$ . Standard deviation is fairly uniform in both groups. Observations that follow indicate general group trends.

Men and women are equally represented in both groups. The high group has no representation at all from age categories 20-29 and 60+ while the 60+ category in the low group is three times as big as any other. Likewise, there are three times as many sixth term (25+) subjects in the low group as in the high group. Surprising, the first-term (1-4 yr.) category has the highest proportional representation of any category in the high group. *This implies that many of the older, seasoned missionaries never really affectively identified with cultural social and personal values while the newest, contemporary missionaries are far more likely to do so.* Marital status, family relations, context in which the subject was raised, schooling and degrees, language proficiency and goals, and desire for personal and ministry development seem to make very little difference between the two groups. However, there are three times as many who identify their primary ministry to be church-planting in the high group, while the low group has the largest number of "miscellaneous" ministries. This suggests that church-planters, to accomplish their ministry, actively are concerned about understanding and relating to cultural values. Christian education (more commonly church-based) is more strongly represented in the high group and theological education (institution-based) in the low group, suggesting that it might be possible for formal teaching to be undertaken with less reference to and identification with cultural values.

In line with this, the low group identifies stronger Biblical and theological knowledge, skills for applying that knowledge, gifts for ministry, ability to assess the cultural, political, and religious context, and ability to formulate workable strategies. Surprisingly, the low group also identified themselves as more likely to have close national friends and to spend more time visiting nationals on a daily and weekly basis



than the high group. However, this low group is much less likely to be involved in *community* social events, recreational activities with national friends, and everyday public events. They also have higher tensions with nationals over organizational matters and cultural aesthetics. This may be because they have more concern with getting the job done than with smooth relationships. Members of the low group are far more persevering in tasks than the high group, have greater self-confidence, and are much less concerned with tactfulness. The low group are also stronger on preferring to work with others than alone.

While curiosity, risk-taking, flexibility, copability, initiative, and empathy are the same for both groups, the high group, most sensitive to cultural values, is somewhat less likely to persevere in a course of action, possibly fearful of running counter to cultural ministry needs. Furthermore, while this group has fewer tensions with nationals, their very sensitivity to nationals can cause enough internal pressures to hinder making close national friends. This is counterproductive to ministry, and doesn't necessarily fit national perceptions, as the profile analysis of ND11 "Skills in Interpersonal Relationships" indicated, where nationals did not seem to mind frankness, as long as there was genuine interpersonal enjoyment.

The high group expressed less problems understanding how nationals relate to each other and to missionaries, what national worldview and philosophical perspectives are, and understanding of their customs, values and ideals, local politics, and public activities. They also expressed less problem with understanding and using non-verbal communication behaviour, organizing and analyzing cultural facts, understanding cultural patterns which explain behaviour, accepting cultural aesthetics, internalizing cultural values, anticipating national behaviours, initiating relationships, getting involved in social activities, and understanding the functional values of social and cultural events. Interpersonal skills were also stronger, with less problem relating to others in ministry teams and less problems with either too little or too much contact with nationals and missionaries. They expressed less problem with sense of restricted independence, with maintaining effective daily schedule, and with imbalance of time spent between nationals and family, work and leisure.

While they sensed a lack of training for the task to a greater degree than the low group, they expressed less need for evaluation, advice, and counsel. They had less problem than the low group in maintaining their devotional life, in planning and implementing church-planting, and in discovering and using resources for ministry. Emotionally, they showed less problems than the bottom group with knowing how and when to express anger, with anxiety in initiating relationships, with relationships with

fellow missionaries and mission leaders, with the stress of regularly seeing local poverty, and with emotional burn-out.

Split-Group Profile Analysis of ND5: “ Adaptation to Cultural Patterns of Thinking and Communicating”

Table 150: Split-Group Profile Analysis of ND5

“Adaptation to Cultural Patterns of Thinking/Communicating”		Var.	Factor
Variable and Instrument Item #		Mean	Loading
1.	Enjoys cultural art, literature, and traditions (Q.7)	3.24	.760
2.	Follows acceptable ways of communicating with all levels of society (Q.6)	4.08	.733
3.	Has good social manners (Q.8)	4.36	.729
4.	Able to use non-verbal communication effectively (Q.2)	3.74	.744
5.	Uses cultural patterns of thought for communicating Biblical truth (Q.16)	3.92	.416

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
15	1.621	.504	14	-1.796	.648	24.55	-15.93	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =4	F =10	20-29= 1	1-4 =4	Mar.NA =13	Sub. =4	Poor= 0	Tense=2	Inc.=12	Y=3
B =1	M =5	30-39=4	5-9 =2	Mar.Nat.= 0	InCit.=1	Mod=11	OK =4	Exc.=3	
C =2		40-49=5	10-14 =3	Single = 2	Farm =3	Well= 4	Close=9		
D =3		50-59=2	15-19 =0	Other = 0	SmTn=6				
E =4		60+ =3	20-24 =1		Other =1				
F =1			25+ =5						

Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =7	F =6	20-29= 0	1-4 =1	Mar.NA =13	Sub. =2	Poor= 2	Tense=2	Inc.=7	Y=2
B =1	M =8	30-39=6	5-9 =3	Mar.Nat.= 0	InCit.=1	Mod=8	OK =8	Exc.=7	
C =2		40-49=3	10-14 =1	Single = 1	Farm =3	Well= 4	Close=4		
D =2		50-59=3	15-19 =4	Other = 0	SmTn=5				
E =1		60+ =2	20-24 =1		Other =3				
F =1			25+ =4						



Personal Background Con't

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Admin.=1 Bkstr.,Ch.Wk.=1 Ch.Pl,F.Manag.=1 Ch.Pl.=1 Ch.Pl.,Ed.=1 Chr.Ed,Counsel=1 Chr.Ed.,W.Min=1 Chr.Ed.,Soc.Min=1 Hsewife,Ling.=1 Lang.St.,Maint=1 Music,Admin.=1 Sec.,Counsel.=1 Theo.Ed.=2 Wom.Min.,Adm.=1	H.S. =14 Tech. = 1 C.Coll.= 1 B.Coll.=10 1.Sem. =1 2 Sem. =3 1 Univ.=2 2 Univ.=2	B.A. =14 B.Sc. =3 B.Th. =0 BRE =1 M.A. =0 M.Div.=2 M.Th. =0 MRE. =0 Ph.D. =0 Other =3	Working on a degree now: 0	Little=5 Some=5 Full = 4	1&1+=2 2&2+=0 3&3+=8 4&4+=4 5 =1	No =5 Yes=10	M.W.=0 Worse=1 Same= 4 Better=7 M.Bet=2
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Min.,MKEd=1 Ch.Pl, Theo.Ed.=1 Ch.Pl.=5 Ch.Pl.,Hsewife=1 Ch.Pl.,Chr.Ed=1 Chr.Ed.=1 Evang.,Camp=1 Th.Admin.=1 Theo.Ed.,Admin.=2	H.S. =12 Tech. = 3 C.Coll.= 0 B.Coll.=7 1.Sem. =3 2 Sem. =3 1 Univ.=2 2 Univ.=1	B.A. =8 B.Sc. =0 B.Th. =1 BRE =0 M.A. =1 M.Div.=2 M.Th. =2 MRE. =0 Ph.D. =1 Other =3	Working on a degree now: 3	Little=4 Some=6 Full = 3	1&1+=0 2&2+=1 3&3+=5 4&4+=6 5 =2	No =7 Yes=6	M.W.=0 Worse=0 Same= 3 Better=8 M.Bet=2

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 2 Y = 11	N = 6 Y = 8	N = 2 Y = 13	N = 14 Y = 1	N = 12 Y = 3	N = 12 Y = 2	N = 11 Y = 4	N = 13 Y = 2	N = 14 Y = 1
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 6 Y = 8	N = 5 Y = 9	N = 0 Y = 14	N = 12 Y = 2	N = 10 Y = 4	N = 8 Y = 6	N = 11 Y = 3	N = 12 Y = 2	N = 11 Y = 3

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =3	0 =10	0 =3	0 =1	0 =2	Hardly =1	LessMn=2	Uncert.=1
1-4=4	1-4=2	1-4=6	1-4=2	1-4=2	1-4=5	1-4=4	Some =3	1X Mn =1	Surviv.=2
5-8=6	5-8=3	5-8=2	5-8=1	5-8=2	5-8=2	5-8=3	Quite =4	1X Wk =7	U.Dev.=1
9+=2	9+=9	9+=2	9+=0	9+=6	9+=6	9+=4	Great =6	Daily =5	A.Dev.=8
							Compl.=1		H.Dev.=2
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =4	0 =8	0 =2	0 =0	0 =3	Hardly =1	LessMn=0	Uncert.=4
1-4=8	1-4=2	1-4=4	1-4=3	1-4=2	1-4=0	1-4=3	Some =3	1X Mn =2	Surviv.=0
5-8=3	5-8=7	5-8=1	5-8=0	5-8=2	5-8=4	5-8=2	Quite =4	1X Wk =6	U.Dev.=0
9+=0	9+=2	9+=2	9+=0	9+=5	9+=8	9+=2	Great =4	Daily =5	A.Dev.=8
							Compl.=1		H.Dev.=1

Ministry Skills

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =0	Little =1	Little =2	Little =1
Some =5	Some =7	Some =6	Some =2	Some =5	Some =8	Some =5
Well =7	Well =5	Well =4	Well =9	Well =5	Well =2	Well =6
V.Well =1	V.Well =1	V.Well =2	V.Well =2	V.Well =4	V.Well =1	V.Well =1
Teach =2	Teach =2	Teach =2	Teach =2	Teach =0	Teach =2	Teach =2
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =2	Little =0
Some =3	Some =5	Some =1	Some =1	Some =5	Some =7	Some =5
Well =4	Well =1	Well =7	Well =5	Well =6	Well =5	Well =6
V.Well =2	V.Well =7	V.Well =4	V.Well =5	V.Well =1	V.Well =0	V.Well =3
Teach =5	Teach =1	Teach =2	Teach =3	Teach =2	Teach =0	Teach =0

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=1	St.D=0	St.D=2	St.D=0	St.D=0
D. =3	D. =3	D. =11	D. =7	D. =1	D. =8	D. =5	D. =8	D. =4	D. =1
N.O=2	N.O=1	N.O=0	N.O=2	N.O=1	N.O=3	N.O=5	N.O=1	N.O=2	N.O=1
Ag. =10	Ag. =11	Ag. =3	Ag. =5	Ag. =10	Ag. =3	Ag. =5	Ag. =4	Ag. =8	Ag. =13
StA.=0	StA.=0	StA.=0	StA.=0	StA.=3	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0
D. =1	D. =3	D. =9	D. =9	D. =4	D. =10	D. =8	D. =9	D. =4	D. =0
N.O=0	N.O=1	N.O=2	N.O=1	N.O=3	N.O=0	N.O=4	N.O=1	N.O=0	N.O=1
Ag. =12	Ag. =10	Ag. =2	Ag. =3	Ag. =5	Ag. =4	Ag. =2	Ag. =2	Ag. =10	Ag. =13
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0

ND5 is *national assessment* of missionary subjects on their adaptation to cultural patterns of thinking and communicating: the extent to which they enjoy cultural art, literature, and traditions, the extent to which they follow acceptable ways of communicating with all levels of society, have good social manners, use non-verbal communication effectively, and use cultural patterns of thought for communicating Biblical truth. The following profile arises from self-assessments of subjects chosen by



nationals. With a t-value of -15.79 (DF-24.55) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p < .01$ . Standard deviation is nearly the same in both groups. Observations that follow indicate general group trends.

There are twice as many women as men in the high group with equal numbers of both the low group. Age groups and terms were evenly represented in both groups. The high group indicated that their family relationships when they were being raised were much closer with much greater inclusion in family activities. The result of this may be greater confidence in relating and communicating. MK's are again equally represented in both groups and so show no advantage from their background. Three times as many who identify church-planting as their primary ministry are in the low group, while Christian education and theological education are equally represented in both groups. There are also more "miscellaneous" ministries represented in the high group.

The high group represents more Bible College degrees and the low group more seminary degrees. Possibly because of this they indicate less confidence in their biblical and theological knowledge, their ability to apply that knowledge, the strength of their gifts and skills for ministry, and their ability to work harmoniously with others like-gifted. However, they do indicate greater ability to research and prepare effective plans for ministry. They indicate greater willingness to take all the time necessary for learning language and culture and have more in the group with clear on-going language learning goals. Accordingly, they tend to be more involved in local seasonal events, family-related events, and everyday public events.

While both groups showed considerable uniformity in curiosity (high), risk-taking (low), perseverance (high), flexibility (high), confidence (high), tactfulness (high), and ability to empathize (high), the high group was twice as likely to acknowledge difficulty in coping with experiences in the past but highly persistent in spite of that.

Split-Group Profile Analysis of ND4: “ Concern for Contextualizing Ministry”

Table 151: Split-Group Profile Analysis of ND4

“Concern for Contextualizing Ministry”				
Variable and Instrument Item #			Var. Mean	Factor Loading
1.	Spends time with people to study cultural ways of doing things (Q.9)		3.41	.853
2.	Seeks advice from national co-workers, ch. leaders, and missionaries (Q.17)		3.75	.688
3.	Is concerned that ministry fits socio-cultural context (Q.21)		3.95	.574

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
14	1.417	.634	14	-2.316	.884	23.45	-13.13	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =1	F =7	20-29= 0	1-4 =3	Mar.NA =11	Sub. =2	Poor= 2	Tense=3	Inc.=10	Y=2
B =3	M =7	30-39=6	5-9 =2	Mar.Nat.= 1	InCit.=2	Mod= 5	OK = 7	Exc.=4	
C =1		40-49=4	10-14 =2	Single = 2	Farm =3	Well= 6	Close=4		
D =2		50-59=2	15-19 =2	Other = 0	SmTn=5				
E =2		60+ =2	20-24 =1		Other =2				
F =5			25+ =4						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =7	F =8	20-29= 0	1-4 =3	Mar.NA =12	Sub. =3	Poor= 2	Tense=2	Inc.=10	Y=4
B =1	M =6	30-39=5	5-9 =1	Mar.Nat.= 0	InCit.=1	Mod= 9	OK = 4	Exc.=4	
C =3		40-49=3	10-14 =1	Single = 2	Farm =5	Well= 2	Close=8		
D =1		50-59=5	15-19 =2	Other = 0	SmTn=3				
E =2		60+ =1	20-24 =3		Other =2				
F =0			25+ =4						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl.=5	H.S. =13	B.A. =7	Working	Little=3	1&1+=1	No =5	M.W.=0
Ch.Pl.,Transl.=1	Tech. = 1	B.Sc. =2	on a	Some=9	2&2+=3	Yes=9	Worse=0
Chr.Ed.=2	C.Coll.= 0	B.Th. =0	degree	Full = 1	3&3+=6		Same= 4
Chr.Ed,Medical=1	B.Coll.= 9	BRE =0	now:		4&4+=2		Better= 7
Evang.,Camp=1	1.Sem. =2	M.A. =1	3		5 =2		M.Bet=1
Sec.,Counsel.=1	2 Sem. =2	M.Div.=2					
Theo.Ed.=1	1 Univ.=3	M.Th. =1					
Th.Ed.,Admin.=1	2 Univ.=2	MRE. =1					
Th.Ed.,Ch.Pl.=1		Ph.D. =1					
		Other =3					
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Bkstr.,Ch.Wk.=1	H.S. =13	B.A. =7	Working	Little=5	1&1+=0	No =6	M.W.=0
Ch.Pl.,Chr..Ed=1	Tech. = 2	B.Sc. =1	on a	Some=7	2&2+=1	Yes=8	Worse=0
Ch.Pl, Theo.Ed.=2	C.Coll.= 0	B.Th. =0	degree	Full = 1	3&3+=5		Same= 6
Ch.Pl.=1	B.Coll.= 9	BRE =1	now:		4&4+=3		Better= 6
Ch.Pl.,Dorm=1	1.Sem. =3	M.A. =0	0		5 =5		M.Bet=1
Chr.Ed,Counsel=1	2 Sem. =1	M.Div.=2					
Chr.Ed.=1	1 Univ.=4	M.Th. =0					
Chr.Ed.,Dorm=1	2 Univ.=1	MRE. =1					
Evang.,Music=1		Ph.D. =0					
Housewife=1		Other =2					
Hsewife,Ling.=1							
Theo.Ed.=2							



Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 4	N = 4	N = 5	N = 13	N = 9	N = 10	N = 11	N = 10	N = 11
Y = 10	Y = 10	Y = 9	Y = 1	Y = 5	Y = 4	Y = 2	Y = 4	Y = 3
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 5	N = 7	N = 3	N = 13	N = 12	N = 10	N = 11	N = 12	N = 12
Y = 7	Y = 6	Y = 11	Y = 1	Y = 2	Y = 4	Y = 3	Y = 2	Y = 2

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =0	0 =2	0 =8	0 =1	0 =1	0 =4	Hardly =0	LessMn=0	Uncert.=2
1-4=9	1-4=4	1-4=7	1-4=2	1-4=4	1-4=5	1-4=4	Some =7	1X Mn =2	Surviv.=1
5-8=2	5-8=3	5-8=1	5-8=0	5-8=0	5-8=3	5-8=0	Quite =4	1X Wk =7	U.Dev.=2
9+=0	9+=4	9+=1	9+=0	9+=4	9+=3	9+=3	Great =2	Daily =5	A.Dev.=7
							Compl.=1		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =0	0 =7	0 =10	0 =4	0 =2	0 =4	Hardly =0	LessMn=2	Uncert.=2
1-4=6	1-4=3	1-4=3	1-4=2	1-4=1	1-4=1	1-4=2	Some =3	1X Mn =2	Surviv.=0
5-8=5	5-8=4	5-8=1	5-8=0	5-8=4	5-8=2	5-8=3	Quite =7	1X Wk =7	U.Dev.=3
9+=1	9+=6	9+=1	9+=0	9+=4	9+=8	9+=1	Great =2	Daily =3	A.Dev.=7
							Compl.=2		H.Dev.=0

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =1	Little =0	Little =1	Little =0
Some =3	Some =5	Some =2	Some =3	Some =4	Some =10	Some =4
Well =5	Well =3	Well =6	Well =4	Well =8	Well =3	Well =7
V.Well =2	V.Well =4	V.Well =3	V.Well =4	V.Well =2	V.Well =0	V.Well =2
Teach =4	Teach =2	Teach =3	Teach =2	Teach =0	Teach =0	Teach =1
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =1	Little =2	Little =1
Some =2	Some =7	Some =6	Some =1	Some =6	Some =8	Some =5
Well =5	Well =2	Well =4	Well =7	Well =5	Well =3	Well =6
V.Well =3	V.Well =4	V.Well =2	V.Well =5	V.Well =2	V.Well =0	V.Well =1
Teach =3	Teach =1	Teach =2	Teach =1	Teach =0	Teach =1	Teach =1

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0
D. =1	D. =2	D. =8	D. =9	D. =5	D. =7	D. =7	D. =9	D. =6	D. =0
N.O=0	N.O=1	N.O=0	N.O=0	N.O=1	N.O=1	N.O=1	N.O=0	N.O=0	N.O=3
Ag. =12	Ag. =11	Ag. =5	Ag. =4	Ag. =7	Ag. =6	Ag. =6	Ag. =4	Ag. =7	Ag. =11
StA.=1	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0	StA.=1	StA.=1	StA.=0

Personal Characteristics Con't

Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0
D. =1	D. =3	D. =11	D. =9	D. =2	D. =7	D. =5	D. =7	D. =5	D. =0
N.O=2	N.O=3	N.O=0	N.O=1	N.O=0	N.O=4	N.O=2	N.O=2	N.O=2	N.O=4
Ag. =9	Ag. =8	Ag. =3	Ag. =4	Ag. =10	Ag. =3	Ag. =6	Ag. =4	Ag. =7	Ag. =10
StA.=2	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=0	StA.=0

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =0	?? =0	?? =0	?? =0	?? =0	?? =1
Occ.=1	Occ. =6	D>V=2	Occ.=1	15 =7	No =0	No =0	No =0	No =0	No =5
Gen.=7	Gen =4	D/V=12	Gen.=12	30 =6	Yes=14	Part =5	Part =5	Part =6	Yes=8
Con=6	Con.=4	D<V=0	Con=1	60 =1		Most=9	Most=9	Most=8	
		C.Vic=0		60+=0					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =0	?? =0	?? =0	?? =0	?? =0
Occ.=0	Occ. =4	D>V=3	Occ.=1	15 =6	No =2	No =0	No =0	No =0	No =5
Gen.=12	Gen =9	D/V=10	Gen.=13	30 =5	Yes=12	Part =5	Part =8	Part =5	Yes=9
Con=2	Con.=1	D<V=1	Con=1	60 =0		Most=9	Most=6	Most=9	
		C.Vic=0		60+=2					

Intensity Levels of Problem Areas<sup>185</sup>

High									
10	13	16	17	18	19	24	26	27	30
Rare=5	Rare=3	Rare=3	Rare=4	Rare=3	Rare=8	Rare=3	Rare=3	Rare=5	Rare=4
Som=2	Som=6	Som=6	Som=5	Som=6	Som=1	Som=5	Som=6	Som=4	Som=4
Oft =0	Oft =2	Oft =2	Oft =1	Oft =1	Oft =1	Oft =2	Oft =0	Oft =1	Oft =1
Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
10	13	16	17	18	19	24	26	27	30
Rare=5	Rare=6	Rare=4	Rare=7	Rare=7	Rare=4	Rare=7	Rare=4	Rare=4	Rare=2
Som=0	Som=3	Som=3	Som=1	Som=2	Som=4	Som=3	Som=3	Som=2	Som=3
Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>185</sup>10="Problems with sleeping patterns," 13="Understanding how nationals interact with each other," 16="Cultural worldview and philosophy," 17="Understanding cultural customs and manners," 18="Understanding cultural values and ideals," 19= Communication patterns and channels," 24="Understanding non-verbal communication behaviour," 26="Organizing and analyzing cultural facts," 27="Understanding cultural patterns explaining behaviour," and 30="Internalizing cultural values."



Intensity Levels of Problem Areas Con't<sup>186</sup>

High									
31	32	33	34	35	37	39	40	42	43
Rare=4	Rare=5	Rare=4	Rare=3	Rare=4	Rare=5	Rare=5	Rare=2	Rare=5	Rare=6
Som=4	Som=6	Som=5	Som=7	Som=5	Som=3	Som=1	Som=6	Som=3	Som=3
Oft =1	Oft =0	Oft =1	Oft =1	Oft =1	Oft =0	Oft =1	Oft =1	Oft =1	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
31	32	33	34	35	37	39	40	42	43
Rare=2	Rare=5	Rare=5	Rare=5	Rare=4	Rare=8	Rare=9	Rare=4	Rare=8	Rare=8
Som=3	Som=4	Som=4	Som=2	Som=3	Som=0	Som=0	Som=3	Som=1	Som=1
Oft =1	Oft =0	Oft =0	Oft =3	Oft =2	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>187</sup>

High									
44	50	52	60	66	69	71	72	74	75
Rare=4	Rare=5	Rare=4	Rare=5	Rare=4	Rare=4	Rare=5	Rare=2	Rare=3	Rare=5
Som=3	Som=3	Som=5	Som=4	Som=2	Som=4	Som=4	Som=4	Som=5	Som=6
Oft =0	Oft =2	Oft =1	Oft =1	Oft =3	Oft =2	Oft =0	Oft =1	Oft =1	Oft =0
Freq=1	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0
Low									
44	50	52	60	66	69	71	72	74	75
Rare=6	Rare=6	Rare=5	Rare=7	Rare=7	Rare=3	Rare=10	Rare=2	Rare=7	Rare=5
Som=1	Som=4	Som=3	Som=1	Som=2	Som=8	Som=1	Som=3	Som=2	Som=2
Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =1	Oft =0
Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>188</sup>

High									
77	78	79	80	81	82	87	88	90	93
Rare=5	Rare=5	Rare=3	Rare=6	Rare=4	Rare=5	Rare=3	Rare=5	Rare=4	Rare=5
Som=5	Som=4	Som=5	Som=3	Som=6	Som=3	Som=8	Som=5	Som=6	Som=3
Oft =1	Oft =1	Oft =1	Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>186</sup>31="Internalizing behaviours," 32="Initiating relationships," 33="Initiating social behaviour," 34="Involvement in social functions," 35="Understanding functional values of social and cultural activities," 37="Too much contact with missionaries," 39="Too much contact with missionaries," 40="Relationships with Team-Members," 42="Relationships with Community Leaders," and 43="Relationships with Local Churches."

<sup>187</sup>44="Relationships with spouse," 50="Quality and extent of social life," 52="Extent and quality of friendships with one's own countrymen," 60="Insufficient Training to Do Work," 66="Politicking' in the mission," 69="Maintaining devotional habits," 71="Personal church background vrs national church function," 72="Demographic study," 74="Preparing culturally fitting gospel presentations," and 75="Preparation and use of culturally useable visual aids."

<sup>188</sup>77="Working in teams," 78="Analyzing and resolving cross-cultural conflict," 79="Planning and implementing church-planting," 80="Discovering and using resources for ministry," 81="How and when to express anger," 82="Personal depression," 87="Discontent with fellow missionaries," 88="Discontent with mission leadership," 90="Handling stress of extreme local poverty," and 93="Emotional burnout."

Low									
77	78	79	80	81	82	87	88	90	93
Rare=8	Rare=3	Rare=6	Rare=3	Rare=9	Rare=5	Rare=7	Rare=6	Rare=4	Rare=7
Som=0	Som=3	Som=1	Som=1	Som=3	Som=3	Som=3	Som=2	Som=3	Som=3
Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =3	Oft =0
Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Factor ND4 is *national assessment* of missionary subjects on their concern for contextualizing their ministry: the extent to which they spend time with nationals to study cultural ways of doing things, the extent to which they seek advice from national co-workers, church leaders, and missionaries, and their general concern that their ministries fit the socio-cultural context. The following profile arises from self-assessments of subjects chosen by nationals. With a t-value of -12.98 (DF=23.45) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p<.01$ . Standard deviation is slightly higher among those in the low group than among those in the high group. Observations that follow indicate general group trends.

Both high and low groups have equal numbers of men and women, and nearly equal representation and proportion of age and term categories (except for 20-29 year olds who are not represented in either group). There is quite a difference with some missions on the numbers represented in both groups, possibly indicating that certain missions emphasize to their missionaries the need to contextualize than do others. There are more MK's in the low group than in the high, though only half of these are from the mission that has the largest number in the low group. Marital status, childhood context and family relations, present work, schooling and degrees, and desire for personal development seem to make very little difference between the two groups. There are as many church-planters and theological educators in the high group as in the low, and both groups show equal proportions of Bible College and Seminary schooling.

The high group, however, showed greater tendency to continue learning (through taking advantage of developmental opportunities offered by the missions and earning degrees in continuing education). Surprisingly, the low group has greater language proficiency and more national friends, while the high group is more willing to take all the time needed to learn language and culture and is more likely to use national mentors. Also surprisingly, the high group identified themselves as more likely to have tensions with nationals over organizational issues and status! Furthermore, they spend less time in social activities such as seasonal events, family related events, religious functions, and recreational activities. Yet these are the ones that nationals identified as most concerned about contextualizing their ministries!



The difference between the two groups does not reside in their ministry skills since both showed nearly the same proficiency in every area, nor in their personal characteristics, since again there was consistency between both group on all areas except copability, where the high group was stronger, but it is seen in the extent to which each group experiences problems. For example, the higher group tended to have more problems with poor sleeping patterns, with knowing how and when to express anger, with depression, with discontent with fellow missionaries and mission leadership, with handling the stresses of local poverty, and with emotional burnout. They also had more problems with understanding how nationals relate to each other and to missionaries, what national worldview and philosophical perspectives are, and understanding of their customs, values and ideals, local politics, and public activities. They also expressed more problem with understanding and using non-verbal communication behaviour, organizing and analyzing cultural facts, understanding cultural patterns which explain behaviour, accepting cultural aesthetics, internalizing cultural values, anticipating national behaviours, initiating relationships, getting involved in social activities, and understanding the functional values of social and cultural events.

Interpersonal skills were also weaker than with the lower group, resulting in less satisfaction with the quality and extent of social life, both with nationals and with missionaries. They expressed more trouble analyzing and resolving cross-cultural conflict, and were more troubled by mission politics. They showed more rigidity than the low group, seen through the greater extent to which their own church background was likely to be in conflict with national church function. They also expressed more problem with doing demographic study, creative evangelism, finding and using resources for ministry, and doing church-planting.

In summary, national perception on concern for contextualizing ministry seems to rest in the willingness to take all the time needed to learn language and culture and to use national mentors, learning from the people, as well as on spiritual dynamics. In spite of their other problems, the high group showed higher evangelistic burden, gentleness and gracious confidence in dealing with others out of trust in God's sovereignty, a stronger prayer-life, better correlation of spiritual gifts to ministry, and greater sense of walking in the Spirit and being led of the Spirit.

Split-Group Profile Analysis of D29: “ Cultural Involvement and Research Skills”

Table 152: Split-Group Profile Analysis of D29

“Cultural Involvement and Research Skills”				
Variable and Instrument Item #			Var. Mean	Factor Loading
1.	“Equal” rather than “fatherly” interaction with nationals (A.10)		3.99	.903
2.	Comfortable with the culture (A.11)		3.63	.847
3.	Able to discriminate homogeneous groups of people in the culture (A.4)		3.62	.698
4.	Comfortable with cultural forms of decision-making (A.3)		3.20	.637
5.	Understand content and value of cultural definitions of moral standards (B.6)		3.47	.536

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
19	1.980	.585	17	-2.070	.962	25.82	-15.04	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital St.	Home	Fam.Ed.	F.Relat	F.Act.	MK
A 10	F =14	20-29= 0	1-4 =6	Mar.NA =16	Sub. =6	Poor= 1	Tense=0	Inc.=14	Y=2
B =5	M =5	30-39=10	5-9 =4	Mar.Nat.= 0	InCit.=1	Mod=14	OK =12	Exc.=5	
C =0		40-49=6	10-14 =2	Single = 3	Farm =4	Well= 4	Close=7		
D =2		50-59=2	15-19 =2	Other = 0	SmTn=8				
E =2		60+ =1	20-24 =2		Other =0				
F =0			25+ =3						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital St.	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =4	F =10	20-29= 2	1-4 =6	Mar.NA =16	Sub. =2	Poor= 3	Tense=5	Inc.=12	Y=4
B =2	M =7	30-39=6	5-9 =2	Mar.Nat.= 0	InCit.=0	Mod=11	OK =6	Exc.=5	
C =1		40-49=4	10-14 =3	Single = 1	Farm =8	Well= 2	Close=6		
D =7		50-59=4	15-19 =0	Other = 0	SmTn=6				
E =3		60+ =1	20-24 =3		Other =0				
F =0			25+ =3						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Admin.,Hsewife=1	H.S. =19	B.A. =5	Working	Little=6	1&1+=3	No =9	M.W.=0
Bkstr.,Ch.Wk.=1	Tech. = 0	B.Sc. =6	on a	Some=10	2&2+=1	Yes=10	Worse=1
Ch.Min.,MKEd=1	C.Coll.= 0	B.Th. =0	degree	Full = 3	3&3+=9		Same= 3
Ch.Pl.=5	B.Coll.=11	BRE =1	now:		4&4+=6		Better=11
Ch.Pl.Admin.=1	1.Sem. =4	M.A. =1	1		5 =0		M.Bet=3
Chr.Ed.,Music=1	2 Sem. =2	M.Div.=2					
Counsellor=1	1 Univ.=3	M.Th. =1					
Ed.,Soc.Min=1	2 Univ.=0	MRE. =1					
Hsewife,Ling.=1		Ph.D. =0					
Lang.Lrn,Ch.Pl=1		Other =2					
Lang.St.,Maint=1							
Teach,Admin.=1							
Th.Ed.,Ch.Pl.=1							
Theo.Ed.=2							



Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl,F.Manage.=1	H.S. =16	B.A. =7	Working on a degree now: 0	Little=5	1&1+=1	No =11	M.W.=0
Ch.Pl.=2	Tech. = 2	B.Sc. =0		Some=6	2&2+=4	Yes=6	Worse=1
Ch.Pl.,Hsewife=1	C.Coll.= 0	B.Th. =0		Full = 4	3&3+=10		Same=9
Ch.Pl.,Transl.=1	B.Coll.=10	BRE =0			4&4+=2		Better=4
Ch.Pl./Liter.=1	1.Sem. =0	M.A. =1			5 =0		M.Bet=1
Chr.Ed.=2	2 Sem. =2	M.Div.=2					
Evang.,Camp=1	1 Univ.=5	M.Th. =0					
Housewife=1	2 Univ.=2	MRE. =1					
Hsewfe,WomMn=1		Ph.D. =0					
Lang.St./Maint=1		Other =3					
Med., Lang.Lrn=1							
Th.Ed.,WomMin=1							
Theo.Ed.=2							
Transl.,Maint.=1							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 6	N = 2	N = 18	N = 14	N = 13	N = 13	N = 16	N = 17
Y = 11	Y = 13	Y = 17	Y = 1	Y = 5	Y = 5	Y = 6	Y = 3	Y = 2
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 9	N = 3	N = 11	N = 4	N = 11	N = 11	N = 12	N = 13
Y = 8	Y = 7	Y = 14	Y = 6	Y = 13	Y = 6	Y = 6	Y = 5	Y = 4

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =5	0 =13	0 =4	0 =1	0 =5	Hardly =0	LessMn=1	Uncert.=2
1-4=10	1-4=4	1-4=8	1-4=2	1-4=2	1-4=4	1-4=6	Some =3	1X Mn =7	Surviv.=2
5-8=6	5-8=5	5-8=2	5-8=0	5-8=2	5-8=3	5-8=2	Quite =6	1X Wk =9	U.Dev.=4
9+=1	9+=9	9+=2	9+=0	9+=9	9+=11	9+=4	Great =9	Daily =2	A.Dev.=10
							Compl.=1		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =4	0 =2	0 =7	0 =14	0 =1	0 =2	0 =6	Hardly =2	LessMn=2	Uncert.=4
1-4=8	1-4=2	1-4=4	1-4=1	1-4=5	1-4=5	1-4=3	Some =5	1X Mn =6	Surviv.=1
5-8=4	5-8=4	5-8=1	5-8=0	5-8=1	5-8=4	5-8=0	Quite =7	1X Wk =6	U.Dev.=4
9+=0	9+=8	9+=4	9+=0	9+=7	9+=6	9+=6	Great =2	Daily =1	A.Dev.=6
							Compl.=0		H.Dev.=1

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =1	Little =1	Little =3	Little =1
Some =10	Some =11	Some =7	Some =4	Some =10	Some =14	Some =9
Well =4	Well =4	Well =6	Well =5	Well =7	Well =1	Well =5
V.Well =3	V.Well =2	V.Well =2	V.Well =6	V.Well =1	V.Well =1	V.Well =2
Teach =3	Teach =2	Teach =3	Teach =3	Teach =0	Teach =0	Teach =2

Ministry Skills Growth Con't

Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =1	Little =1	Little =1	Little =1	Little =5	Little =1
Some =7	Some =7	Some =3	Some =2	Some =8	Some =7	Some =5
Well =6	Well =3	Well =8	Well =10	Well =4	Well =3	Well =8
V.Well =0	V.Well =2	V.Well =1	V.Well =2	V.Well =4	V.Well =0	V.Well =1
Teach =4	Teach =4	Teach =4	Teach =2	Teach =0	Teach =2	Teach =2

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=1	St.D=1	St.D=0	St.D=1	St.D=1	St.D=1	St.D=0	St.D=0
D. =3	D. =3	D. =12	D. =11	D. =6	D. =7	D. =3	D. =8	D. =5	D. =2
N.O=3	N.O=3	N.O=1	N.O =3	N.O=0	N.O=2	N.O=6	N.O=1	N.O=2	N.O=3
Ag. =11	Ag. =13	Ag. =5	Ag. =4	Ag. =11	Ag. =9	Ag. =8	Ag. =8	Ag. =9	Ag. =12
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=2	StA.=1
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=2	St.D=2	St.D=0	St.D=0	St.D=0	St.D=3	St.D=0	St.D=0
D. =3	D. =0	D. =7	D. =9	D. =3	D. =6	D. =5	D. =8	D. =5	D. =3
N.O=1	N.O=2	N.O=2	N.O=1	N.O=2	N.O=1	N.O=1	N.O=1	N.O=0	N.O=4
Ag. =12	Ag. =13	Ag. =6	Ag. =5	Ag. =8	Ag. =9	Ag. =10	Ag. =3	Ag. =10	Ag. =9
StA.=1	StA.=2	StA.=0	StA.=0	StA.=4	StA.=1	StA.=1	StA.=2	StA.=2	StA.=1

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =0	?? =0	?? =1	?? =0	?? =2
Occ.=1	Occ. =4	D>V=3	Occ.=1	15 =7	No =1	No =1	No =0	No =0	No =6
Gen.=11	Gen =12	D/V=16	Gen.=17	30 =9	Yes=17	Part =7	Part =4	Part =5	Yes=10
Con=7	Con.=3	D<V=0	Con=1	60 =2		Most=10	Most=13	Most=13	
		C.Vic=0		60+=0					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=1	Rare=0	5 =3	?? =1	?? =0	?? =0	?? =1	?? =4
Occ.=5	Occ. =4	D>V=2	Occ.=0	15 =8	No =3	No =0	No =0	No =0	No =2
Gen.=10	Gen =9	D/V=13	Gen.=17	30 =5	Yes=14	Part =11	Part =13	Part =9	Yes=11
Con=2	Con.=4	D<V=1	Con=0	60 =1		Most=7	Most=5	Most=8	
		C.Vic=0		60+=0					

Split-group profile analysis of factor D29 assesses differences between high and low groups on cultural involvement and research skills: interaction with nationals, comfort with the culture, ability to discriminate homogeneous groups of people in the culture, comfort with national forms of decision-making, and understanding of content and value of cultural forms of decision-making. It must be remembered that results are based on subject *self-perception* rather than on any objective test. With a t-value of -15.04 (DF=25.82) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at p<.01. Standard deviation is twice as high in the low group as in the high group. Observations that follow indicate general group trends.



There are three times as many women as men in the high group and one and a half times as many women as men in the low group as well. Two missions are not represented in the high group at all; one mission in neither group. Age categories and terms are fairly well represented in both groups, though 20-29 year olds do not appear at all in the high group. However, older first-termers are proportionately over-represented in both the high group and low. These first-termers are from only three missions, but all three are in both high and low groups making it difficult to perceive in set patterns. There are twice as many MK's in the low group as in the high, again bringing into question the advantage MK's might have. There seems to be little effect from marital status, childhood family relations (though the high group had none who came from tense homes in contrast to the low group which had 5), present work (church-planters and Christian/theological educators evenly represented), or desire for personal development.

The high group has more individuals trained in Bible Colleges and Seminaries while the low group has more university graduates than the high group. The high group has also more degrees, is stronger in language proficiency and on-going language-learning goals, and perceives their present on-field status to be higher than it was at home. The high group is also more willing to give time needed for learning language and culture, to use national mentors, and to have national friends. They visit more often on a daily and weekly basis and are more involved in seasonal community events, family-related events, religious activities, and recreational activities. They perceive themselves to be more highly likely to engage in enjoyable activities with nationals, to have stronger inter-personal problem-solving skills, and to have fewer tensions with nationals over inter-personal relationships and organizational issues.

Ministry skills do not show any helpful pattern. The high group is much stronger in Biblical and theological knowledge (as seen from the higher number of Bible College and Seminary graduates) but the low group indicates greater strength in ability to apply that knowledge. Both are fairly equal on development of gifts and skills for ministry, but the high group is much stronger on ability to work harmoniously with others like-gifted. The low group is stronger on abilities to assess context and do research, while both are equal in ability to formulate workable plans. Nor is there much difference in personal characteristics. While both groups show considerable uniformity in curiosity (high), risk-taking (low), confidence (half and half), initiative (low), preference in working with others (high), and ability to empathize (high), the high group tends to be stronger in perseverance and flexibility, and more likely than the low group to acknowledge difficulties with coping in the past. The high group is more likely to be frank than the low group.

The differences between the two groups are considerable in spiritual dynamics. The high group is more evangelistically burdened, more likely to be gentle and gracious in dealings through trust in God’s sovereignty to work in other people’s lives, stronger in prayer, more likely to have spiritual gifts correlated with work, sensing the empowering of the Holy Spirit for ministry, having a much greater sense of walking in the Spirit and being led by the Spirit, and having daily life characterized by the fruit of the Spirit. However, there were more in the high group who responded “no” to the question, “Have you personally experienced ‘power encounter’ in spiritual warfare?” either because they haven’t had such experiences (and some in the high group who were low in spiritual dynamics may not have), misunderstanding of the terminology (possibly fearing charismatic significance), or through failure to correlate their experiences to the meaning of this question.

Split-Group Profile Analysis of D31: “ Change-Agent Skills”

Table 153: Split-Group Profile Analysis of D31

<b>“Change-Agent Skills”</b>				
<i>Variable and Instrument Item #</i>			<i>Var. Mean</i>	<i>Factor Loading</i>
1.	Able to introduce new concept into commun. through approp. channels (A.6)		2.97	.945
2.	Can describe changes in cultural values and why changes taking place (A.8)		2.80	.877
3.	Able to adapt an argument to national attitudes and values (A.1)		3.38	.806
4.	Able to identify unofficial local leaders (A.7)		3.10	.763
5.	Can utilize family linkages for ministry contacts (A.5)		3.53	.600
6.	Able to relate to individual and cultural felt needs for ministry (A.9)		3.11	.575
7.	Effective use of non-verbal communication (A.2)		3.47	.566

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
17	1.930	.795	18	-2.262	.676	33.00	-17.24	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =6	F =10	20-29= 1	1-4 =4	Mar.NA =16	Sub. =3	Poor= 2	Tense=3	Inc.=11	Y=1
B =2	M =7	30-39=6	5-9 =2	Mar.Nat.= 0	InCit.=2	Mod=11	OK =9	Exc.=6	
C =1		40-49=4	10-14 =2	Single = 1	Farm =5	Well= 4	Close=5		
D =3		50-59=5	15-19 =2	Other = 0	SmTn=6				
E =3		60+ =1	20-24 =3		Other =1				
F =2			25+ =4						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =8	F =12	20-29= 0	1-4 =7	Mar.NA =14	Sub. =5	Poor= 3	Tense=0	Inc.=12	Y=2
B =3	M =6	30-39=10	5-9 =2	Mar.Nat.= 0	InCit.=1	Mod=11	OK =11	Exc.=6	
C =0		40-49=3	10-14 =2	Single = 3	Farm =5	Well= 4	Close=7		
D =4		50-59=4	15-19 =2	Other = 1	SmTn=5				
E =2		60+ =1	20-24 =0		Other =2				
F =1			25+ =5						



Personal Background Con't

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl, Theo.Ed.=1	H.S. =17	B.A. =13	Working on a degree now: 1	Little=6	1&1+=0	No =8	M.W.=0
Ch.Pl.=5	Tech. = 1	B.Sc. =0		Some=7	2&2+=2	Yes=9	Worse=2
Ch.Pl.,Chr.Ed.=2	C.Coll.= 1	B.Th. =0		Full = 4	3&3+=7		Same= 4
Ch.Pl.,Hsewife=1	B.Coll.=11	BRE =1			4&4+=5		Better=9
Chr.Ed.=2	1.Sem. =2	M.A. =1			5 =3		M.Bet=2
Housewife=1	2 Sem. =2	M.Div.=2					
Hsewfe,WomMn=1	1 Univ.=5	M.Th. =0					
Med., Lang.Lrn=1	2 Univ.=2	MRE. =0					
Sec.,Counsel.=1		Ph.D. =1					
Th.Ed.,Pastoral=1		Other =4					
Theo.Ed.=1							
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Admin.,Hsewife=1	H.S. =18	B.A. =9	Working on a degree now: 2	Little=5	1&1+=2	No =5	M.W.=0
Bkstr.,Ch.Wk.=1	Tech. = 1	B.Sc. =2		Some=7	2&2+=3	Yes=13	Worse=1
Ch.Min.,MKEd=1	C.Coll.= 0	B.Th. =1		Full = 5	3&3+=10		Same= 4
Ch.Pl.=3	B.Coll.=9	BRE =0			4&4+=3		Better=6
Ch.Pl.,Hsewife=1	1.Sem. =5	M.A. =1			5 =0		M.Bet=5
Ch.Pl.,Liter.=1	2 Sem. =2	M.Div.=1					
Chr.Ed.,Music=1	1 Univ.=6	M.Th. =2					
Chr.Ed..Music=1	2 Univ.=1	MRE. =1					
Lang.Lrn,Ch.Pl=1		Ph.D. =0					
Lang.St.,Maint.=2		Other =4					
Teach,Medical=1							
Th.Admin.=1							
Th.Ed.,Ch.Pl.=1							
Theo.Ed.=2							

Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 8	N = 2	N = 15	N = 11	N = 13	N = 13	N = 13	N = 16
Y = 8	Y = 9	Y = 15	Y = 2	Y = 6	Y = 4	Y = 4	Y = 4	Y = 1
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 9	N = 7	N = 6	N = 15	N = 10	N = 8	N = 12	N = 14	N = 13
Y = 8	Y = 10	Y = 12	Y = 3	Y = 8	Y = 9	Y = 6	Y = 4	Y = 5

Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =0	0 =0	0 =4	0 =10	0 =2	0 =0	0 =2	Hardly =1	LessMn=0	Uncert.=2
1-4=8	1-4=1	1-4=4	1-4=2	1-4=2	1-4=3	1-4=4	Some =2	1X Mn =2	Surviv.=0
5-8=6	5-8=9	5-8=2	5-8=0	5-8=5	5-8=4	5-8=3	Quite =8	1X Wk =11	U.Dev.=4
9+=1	9+=5	9+=3	9+=0	9+=6	9+=8	9+=4	Great =4	Daily =4	A.Dev.=9
							Compl.=2		H.Dev.=2
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =2	0 =1	0 =6	0 =14	0 =4	0 =3	0 =7	Hardly =0	LessMn=1	Uncert.=1
1-4=8	1-4=4	1-4=6	1-4=0	1-4=2	1-4=3	1-4=3	Some =8	1X Mn =6	Surviv.=0
5-8=5	5-8=3	5-8=2	5-8=0	5-8=1	5-8=3	5-8=1	Quite =4	1X Wk =8	U.Dev.=6
9+=0	9+=9	9+=2	9+=0	9+=8	9+=8	9+=3	Great =5	Daily =1	A.Dev.=8
							Compl.=0		H.Dev.=1

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =0	Little =1	Little =3	Little =0
Some =2	Some =6	Some =2	Some =1	Some =4	Some =7	Some =4
Well =7	Well =3	Well =8	Well =9	Well =7	Well =4	Well =6
V.Well =2	V.Well =4	V.Well =4	V.Well =3	V.Well =3	V.Well =1	V.Well =4
Teach =5	Teach =4	Teach =2	Teach =4	Teach =2	Teach =2	Teach =3
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =0	Little =1	Little =5	Little =1
Some =8	Some =11	Some =6	Some =4	Some =10	Some =10	Some =9
Well =4	Well =1	Well =7	Well =5	Well =5	Well =2	Well =4
V.Well =3	V.Well =4	V.Well =3	V.Well =7	V.Well =1	V.Well =1	V.Well =3
Teach =3	Teach =2	Teach =1	Teach =2	Teach =1	Teach =0	Teach =1

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=2	St.D=1	St.D=0	St.D=0	St.D=0	St.D=2	St.D=0	St.D=0
D. =3	D. =1	D. =10	D. =13	D. =3	D. =11	D. =8	D. =10	D. =5	D. =1
N.O=2	N.O=1	N.O=2	N.O=2	N.O=1	N.O=1	N.O=1	N.O=2	N.O=1	N.O=3
Ag. =11	Ag. =14	Ag. =3	Ag. =1	Ag. =11	Ag. =5	Ag. =7	Ag. =2	Ag. =10	Ag. =12
StA.=1	StA.=1	StA.=0	StA.=0	StA.=2	StA.=0	StA.=1	StA.=1	StA.=1	StA.=1
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=2	St.D=0	St.D=1	St.D=1	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0	St.D=0
D. =1	D. =2	D. =10	D. =11	D. =3	D. =6	D. =4	D. =9	D. =6	D. =4
N.O=1	N.O=4	N.O=1	N.O=0	N.O=0	N.O=4	N.O=3	N.O=1	N.O=1	N.O=3
Ag. =14	Ag. =11	Ag. =6	Ag. =6	Ag. =12	Ag. =7	Ag. =9	Ag. =7	Ag. =8	Ag. =9
StA.=0	StA.=1	StA.=0	StA.=0	StA.=3	StA.=0	StA.=0	StA.=0	StA.=2	StA.=1

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =0	?? =0	?? =0	?? =1	?? =1
Occ.=2	Occ. =6	D>V=0	Occ.=0	15 =6	No =1	No =0	No =0	No =0	No =5
Gen.=12	Gen =8	D/V=16	Gen.=15	30 =8	Yes=16	Part =8	Part =11	Part =6	Yes=11
Con=3	Con.=3	D<V=1	Con=2	60 =2		Most=9	Most=6	Most=10	
		C.Vic=0		60+=0					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =3	?? =1	?? =0	?? =1	?? =0	?? =6
Occ.=2	Occ. =7	D>V=5	Occ.=2	15 =6	No =5	No =1	No =0	No =0	No =5
Gen.=11	Gen =7	D/V=13	Gen.=15	30 =6	Yes=12	Part =8	Part =7	Part =8	Yes=6
Con=5	Con.=4	D<V=0	Con=1	60 =3		Most=9	Most=10	Most=10	
		C.Vic=0		60+=0					



Intensity Levels of Problem Areas<sup>189</sup>

High									
13	15	19	22	25	26	27	28	30	31
Rare=8	Rare=4	Rare=8	Rare=5	Rare=5	Rare=5	Rare=6	Rare=3	Rare=5	Rare=8
Som=4	Som=7	Som=2	Som=5	Som=4	Som=3	Som=3	Som=7	Som=4	Som=2
Oft =2	Oft =2	Oft =0	Oft =1	Oft =1	Oft =2	Oft =1	Oft =1	Oft =1	Oft =1
Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
13	15	19	22	25	26	27	28	30	31
Rare=5	Rare=3	Rare=7	Rare=3	Rare=7	Rare=5	Rare=6	Rare=4	Rare=4	Rare=3
Som=7	Som=5	Som=4	Som=4	Som=3	Som=4	Som=5	Som=5	Som=2	Som=3
Oft =2	Oft =4	Oft =1	Oft =2	Oft =1	Oft =2	Oft =1	Oft =2	Oft =2	Oft =2
Freq=0	Freq=2	Freq=1	Freq=1	Freq=2	Freq=2	Freq=1	Freq=1	Freq=2	Freq=1
Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>190</sup>

High									
32	33	34	35	38	50	51	53	54	55
Rare=7	Rare=7	Rare=7	Rare=5	Rare=10	Rare=7	Rare=10	Rare=6	Rare=8	Rare=7
Som=4	Som=3	Som=2	Som=5	Som=1	Som=5	Som=2	Som=2	Som=3	Som=3
Oft =1	Oft =1	Oft =3	Oft =1	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
32	33	34	35	38	50	51	53	54	55
Rare=5	Rare=5	Rare=4	Rare=6	Rare=3	Rare=3	Rare=7	Rare=10	Rare=4	Rare=4
Som=7	Som=5	Som=6	Som=5	Som=6	Som=7	Som=4	Som=1	Som=4	Som=6
Oft =1	Oft =1	Oft =1	Oft =0	Oft =2	Oft =0	Oft =2	Oft =0	Oft =2	Oft =1
Freq=0	Freq=0	Freq=1	Freq=2	Freq=0	Freq=1	Freq=1	Freq=1	Freq=1	Freq=0
Alw=0	Alw=0	Alw=1	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>191</sup>

High									
56	57	62	63	66	72	73	75	76	78
Rare=4	Rare=7	Rare=9	Rare=5	Rare=6	Rare=4	Rare=2	Rare=6	Rare=4	Rare=4
Som=6	Som=2	Som=1	Som=5	Som=3	Som=3	Som=3	Som=4	Som=5	Som=6
Oft =0	Oft =2	Oft =1	Oft =1	Oft =1	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1
Freq=2	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>189</sup>13=“Understanding how nationals interaction,” 15=“Understanding the way nationals think,” 19= Communication patterns,” 22=“Understanding local politics,” 25=“Problems finding a national mentor,” 26=“Analyzing cultural facts,” 27=“Understanding cultural behaviour patterns,” 28=“Understanding motivations,” 30=“Internalizing cultural values,” and 31=“Internalizing behaviours.”

<sup>190</sup>32=“Initiating relationships,” 33=“Initiating social behaviour,” 34=“Involvement in social functions,” 35=“Understanding functional values of social and cultural activities,” 38=“Lack of contact with nationals,” 50=“Quality and extent of social life,” 51=“Extent and quality of friendships with nationals,” 53=“Personal independence experienced,” 54=“Comfort with national church goals and aspirations,” and 55=“Proper balance of time spent with nationals and with the family.”

<sup>191</sup>56=“Lack of motivation,” 57=“Lack of direction from mission leaders,” 62=“Lack of evaluation, advice, and counsel,” 63=“Balancing time in all areas of life,” 66=“‘Politicking’ in the mission,” 72=“Demographic study,” 73=“Ability to do ethnographic study,” 75=“Preparation of culturally useable visual aids,” 76=“Effective follow-up and discipleship,” and 78=Analyzing and resolving cross-cultural conflict.”

Low									
56	57	62	63	66	72	73	75	76	78
Rare=8	Rare=9	Rare=6	Rare=5	Rare=9	Rare=1	Rare=2	Rare=6	Rare=5	Rare=5
Som=4	Som=4	Som=4	Som=3	Som=0	Som=2	Som=0	Som=3	Som=1	Som=4
Oft =2	Oft =0	Oft =2	Oft =5	Oft =1	Oft =2	Oft =1	Oft =1	Oft =2	Oft =2
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=1	Freq=2	Freq=0
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0

#### Intensity Levels of Problem Areas<sup>192</sup>

High					
80	83	87	88	90	94
Rare=5	Rare=8	Rare=3	Rare=6	Rare=7	Rare=5
Som=2	Som=2	Som=6	Som=2	Som=4	Som=5
Oft =1	Oft =0	Oft =2	Oft =0	Oft =1	Oft =0
Freq=1	Freq=0	Freq=1	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=1
Low					
80	83	87	88	90	94
Rare=2	Rare=9	Rare=9	Rare=11	Rare=4	Rare=13
Som=1	Som=5	Som=5	Som=3	Som=4	Som=1
Oft =2	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1
Freq=2	Freq=0	Freq=0	Freq=0	Freq=3	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0

Split-group profile analysis of factor D31 assesses differences between high and low groups on change-agent skills, that is, the ability to introduce new concepts in the community through appropriate channels, ability to describe changes in cultural values and why these changes are taking place, ability to adapt arguments to national attitudes and values, ability to identify the unofficial local leaders, ability to utilize family linkages for ministry contacts, ability to relate to individual and cultural felt needs for ministry, and effective use of non-verbal communication. It must be remembered that results are based on subject *self-perception* rather than on any objective test. With a t-value of -17.24 (DF=33) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p<.01$ . Standard deviation is equal in both groups. Observations that follow indicate general group trends.

There are more women than men in the high group but twice as many women as men in the low group. Age categories are fairly even between high and low groups, but the surprise is that first-term missionaries and sixth term missionaries are disproportionately high in both high and low groups. There are twice as many first-termers and slightly more sixth-termers in the low group than in the high, however. Marital status, childhood family relations, present work (there are more church-planters in

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<sup>192</sup>80="Discovering and using resources for ministry," 83="Anxiety in initiating relationships with nationals," 87="Discontent with fellow missionaries," 88="Discontent with mission leadership," 90="Handling stress of extreme local poverty," and 94="Spiritual burnout."



the high group and Christian/theological educators evenly in both groups), schooling and degrees, and desire for personal development seem to make very little difference between the two groups.

The high group has considerably higher language proficiency but fewer with clear language-learning goals, perhaps because fewer sense the need for it. Both groups are the same in taking all the time needed for learning culture and language (half and half), on using national mentors (half and half), and on tensions with nationals (generally few, though the low group has more tensions than the high group in church forms and practice and in theological issues). The high group does make more friends and is more involved in seasonal, religious, and daily public social events, as well as daily and weekly visits in national homes. They also perceive themselves to more adept at engaging in enjoyable activities with national friends.

The high group dominates the low in every ministry skill area: knowledge and application of the Bible and theology, development of skills and gifts for ministry, ability to work harmoniously with others like-gifted, ability to assess political, religious, and social context, and ability to do research and to make effective plans. The high group also has slightly less trouble with understanding how nationals relate to each other, what national worldview and philosophical perspectives are, and understanding of their customs, values and ideals, local politics, and public activities. They also expressed less problem with understanding and using non-verbal communication behaviour, organizing and analyzing cultural facts, understanding cultural patterns which explain behaviour, accepting cultural aesthetics, internalizing cultural values, anticipating national behaviours, initiating relationships, getting involved in social activities, and understanding the functional values of social and cultural events. They were also stronger in being able to do demographic and ethnographic study, expressed less trouble with producing and using culturally valid visual aids, doing effective follow-up, and finding and using resources for ministry.

Interpersonal skills were also stronger, the high group less troubled by with either too little or too much contact with nationals and missionaries, by the quality and extent of their social life, with being able to balance of time spent between nationals and family, work and leisure, and with national church goals and aspirations. They were however, slightly more troubled by mission politics<sup>193</sup> and by cross-cultural conflicts. They also

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<sup>193</sup>They also expressed more problems with discontent with fellow missionaries and mission leadership.

expressed more problem with sense of restricted independence, with motivation, and with lack of direction from mission leadership.<sup>194</sup>

In spiritual dynamics both groups are alike, though the high group does indicate more victory than failure in thought life, motives and actions, while all but one indicated that spiritual gifts were in line with ministry. Also, nearly twice as many in the high group as the low indicated that they had experienced “power encounter” in spiritual warfare. Both groups are alike in such personal characteristics as curiosity (high), risk-taking (low), perseverance (high), copability, and sociability in work. The high group was stronger in flexibility, confidence, tactfulness, and empathy, yet showed more potential of spiritual burn-out.

Split-Group Profile Analysis of ND8: “Concern for Developing Nationals”

Table 154: Split-Group Profile Analysis of ND8

“Concern for Developing Nationals”					
Variable and Instrument Item #				Var. Mean	Factor Loading
1.	Concern with developing nationals (Part 1, Q.5)			4.24	.924
2.	Able to adapt arguments to nationals attitudes and values (Q.14)			3.70	.505
3.	Concern for training nationals (Q.20)			4.09	.390
4.	Knows and utilizes decision-making patterns of the culture (Q.5)			3.23	.365

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
16	1.841	.639	14	-1.830	.701	28.00	-15.00	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =7	F =8	20-29= 1	1-4 =4	Mar.NA =14	Sub. =4	Poor=1	Tense=3	Inc.=10	Y=3
B =3	M =8	30-39=6	5-9 =3	Mar.Nat.= 1	InCit.=1	Mod=12	OK = 6	Exc.=6	
C =1		40-49=7	10-14 =1	Single = 1	Farm =4	Well= 2	Close=7		
D =1		50-59=2	15-19 =3	Other = 0	SmTn=5				
E =3		60+ =0	20-24 =3		Other =2				
F =1			25+ =2						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =5	F =6	20-29= 1	1-4 =4	Mar.NA =12	Sub. =2	Poor= 1	Tense=1	Inc.=12	Y=5
B =1	M =8	30-39=5	5-9 =1	Mar.Nat.= 0	InCit.=2	Mod=8	OK = 7	Exc.=2	
C =3		40-49=1	10-14 =1	Single = 2	Farm =2	Well= 5	Close=6		
D =3		50-59=4	15-19 =1	Other = 0	SmTn=5				
E =1		60+ =3	20-24 =6		Other =3				
F =1			25+ =1						

<sup>194</sup>This sense of need for more leadership appears to be contradicted by expression of less problem with lack of evaluation, advice, and counsel in their ministry. Perhaps they sense a need for broad direction but not for immediate direction and evaluation of daily activities.



## Personal Background Con't

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl,F.Manag.=1	H.S. =16	B.A. =9	Working on a degree now: 3	Little=7	1&1+=0	No =7	M.W.=0
Ch.Pl.=5	Tech. = 1	B.Sc. =2		Some=9	2&2+=1	Yes=9	Worse=0
Ch.Pl.,Dorm=1	C.Coll.= 0	B.Th. =0		Full = 0	3&3+=9		Same= 3
Ch.Pl.,Hsewife=1	B.Coll.= 9	BRE =0			4&4+=3		Better=10
Ch.Pl.,Chr.Ed=1	1.Sem. =4	M.A. =1			5 =3		M.Bet=2
Chr.Ed.,Dorm=1	2 Sem. =1	M.Div.=2					
Chr.Ed.,Music=1	1 Univ.=5	M.Th. =0					
Evang.,Music=1	2 Univ.=2	MRE. =1					
Past.,YouthMin=1		Ph.D. =1					
Theo.Ed.=2		Other =4					
Wom.Min.,Adm.=1							
Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Bkstr.,Ch.Wk.=1	H.S. =14	B.A. =5	Working on a degree now: 0	Little=4	1&1+=3	No =7	M.W.=0
Ch.Pl=5	Tech. = 0	B.Sc. =2		Some=7	2&2+=3	Yes=7	Worse=0
Ch.Pl, Theo.Ed.=1	C.Coll.= 1	B.Th. =0		Full = 1	3&3+=2		Same= 5
Chr.Ed,Counsel=1	B.Coll.=10	BRE =0			4&4+=3		Better=7
Chr.Ed.=1	1.Sem. =4	M.A. =0			5 =3		M.Bet=2
Chr.Ed., Med.=1	2 Sem. =1	M.Div.=2					
Chr.Ed.,W.Min=1	1 Univ.=5	M.Th. =2					
Housewife=1	2 Univ.=0	MRE. =0					
MusicAdmin.=1		Ph.D. =0					
Sec.,Counsel.=1		Other =3					

## Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 5	N = 2	N = 14	N = 12	N = 12	N = 11	N = 13	N = 12
Y = 8	Y = 11	Y = 14	Y = 2	Y = 4	Y = 4	Y = 4	Y = 3	Y = 4
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 4	N = 8	N = 6	N = 11	N = 10	N = 9	N = 9	N = 12	N = 12
Y = 9	Y = 5	Y = 8	Y = 3	Y = 4	Y = 5	Y = 5	Y = 2	Y = 2

## Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =0	0 =3	0 =11	0 =4	0 =0	0 =3	Hardly =1	LessMn=0	Uncert.=0
1-4=8	1-4=3	1-4=7	1-4=2	1-4=6	1-4=2	1-4=4	Some =3	1X Mn =1	Surviv.=0
5-8=3	5-8=4	5-8=3	5-8=1	5-8=1	5-8=4	5-8=1	Quite =7	1X Wk =9	U.Dev.=2
9+=0	9+=7	9+=1	9+=0	9+=2	9+=5	9+=4	Great =5	Daily =6	A.Dev.=11
							Compl.=0		H.Dev.=0
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =1	0 =4	0 =7	0 =3	0 =2	0 =3	Hardly =2	LessMn=3	Uncert.=2
1-4=6	1-4=4	1-4=6	1-4=2	1-4=2	1-4=4	1-4=4	Some =4	1X Mn =1	Surviv.=1
5-8=4	5-8=2	5-8=1	5-8=1	5-8=2	5-8=0	5-8=2	Quite =3	1X Wk =5	U.Dev.=4
9+=1	9+=4	9+=0	9+=1	9+=4	9+=7	9+=2	Great =2	Daily =4	A.Dev.=5
							Compl.=2		H.Dev.=0

Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =0	Little =0
Some =1	Some =7	Some =4	Some =2	Some =6	Some =9	Some =5
Well =8	Well =3	Well =7	Well =9	Well =5	Well =6	Well =8
V.Well =3	V.Well =3	V.Well =3	V.Well =4	V.Well =5	V.Well =1	V.Well =2
Teach =4	Teach =3	Teach =2	Teach =1	Teach =0	Teach =0	Teach =1
Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =1	Little =1	Little =1	Little =2	Little =3	Little =2
Some =3	Some =6	Some =5	Some =1	Some =6	Some =9	Some =7
Well =7	Well =4	Well =7	Well =9	Well =6	Well =1	Well =2
V.Well =2	V.Well =3	V.Well =1	V.Well =3	V.Well =0	V.Well =1	V.Well =3
Teach =1	Teach =0	Teach =0	Teach =0	Teach =0	Teach =0	Teach =0

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=1	St.D=1	St.D=0	St.D=1	St.D=0	St.D=2	St.D=0	St.D=0
D. =1	D. =2	D. =9	D. =11	D. =4	D. =9	D. =6	D. =7	D. =5	D. =1
N.O=3	N.O=1	N.O=2	N.O=0	N.O=3	N.O=2	N.O=4	N.O=1	N.O=1	N.O=3
Ag. =11	Ag. =13	Ag. =4	Ag. =4	Ag. =7	Ag. =4	Ag. =6	Ag. =5	Ag. =9	Ag. =12
StA.=1	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0
D. =2	D. =3	D. =10	D. =10	D. =1	D. =7	D. =7	D. =8	D. =3	D. =0
N.O=2	N.O=1	N.O=0	N.O=0	N.O=1	N.O=2	N.O=1	N.O=2	N.O=1	N.O=4
Ag. =10	Ag. =10	Ag. =4	Ag. =4	Ag. =12	Ag. =4	Ag. =6	Ag. =3	Ag. =10	Ag. =10
StA.=0	StA.=0	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0	StA.=0	StA.=0

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =2	?? =0	?? =0	?? =1	?? =0	?? =3
Occ.=1	Occ. =6	D>V=4	Occ.=2	15 =7	No =1	No =0	No =0	No =0	No =6
Gen.=14	Gen =7	D/V=10	Gen.=13	30 =5	Yes=15	Part =5	Part =7	Part =8	Yes=7
Con=1	Con.=3	D<V=2	Con=1	60 =1		Most=11	Most=8	Most=8	
		C.Vic=0		60+=1					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=1	Rare=0	5 =1	?? =1	?? =0	?? =1	?? =1	?? =1
Occ.=1	Occ. =4	D>V=3	Occ.=1	15 =5	No =3	No =1	No =0	No =0	No =4
Gen.=10	Gen =7	D/V=10	Gen.=13	30 =6	Yes=10	Part =5	Part =7	Part =7	Yes=9
Con=3	Con.=3	D<V=0	Con=0	60 =1		Most=8	Most=6	Most=6	
		C.Vic=0		60+=1					



Intensity Levels of Problem Areas<sup>195</sup>

High									
12	13	15	16	18	22	23	30	31	32
Rare=4	Rare=5	Rare=5	Rare=3	Rare=7	Rare=4	Rare=6	Rare=2	Rare=2	Rare=7
Som=5	Som=6	Som=5	Som=6	Som=2	Som=5	Som=5	Som=6	Som=6	Som=6
Oft =1	Oft =1	Oft =3	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1	Oft =0
Freq=1	Freq=0	Freq=0	Freq=2	Freq=2	Freq=1	Freq=1	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=2	Alw=0	Alw=0	Alw=0	Alw=0
Low									
12	13	15	16	18	22	23	30	31	32
Rare=3	Rare=4	Rare=3	Rare=4	Rare=5	Rare=5	Rare=2	Rare=2	Rare=2	Rare=4
Som=2	Som=3	Som=3	Som=2	Som=3	Som=3	Som=4	Som=3	Som=2	Som=2
Oft =1	Oft =1	Oft =2	Oft =2	Oft =1	Oft =1	Oft =1	Oft =1	Oft =1	Oft =0
Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>196</sup>

High									
34	35	36	40	44	45	46	50	54	55
Rare=6	Rare=5	Rare=8	Rare=5	Rare=6	Rare=5	Rare=5	Rare=5	Rare=9	Rare=4
Som=5	Som=6	Som=1	Som=4	Som=5	Som=5	Som=5	Som=4	Som=4	Som=6
Oft =2	Oft =1	Oft =3	Oft =1	Oft =0	Oft =0	Oft =0	Oft =3	Oft =1	Oft =1
Freq=0	Freq=0	Freq=1	Freq=2	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
34	35	36	40	44	45	46	50	54	55
Rare=1	Rare=3	Rare=3	Rare=3	Rare=5	Rare=4	Rare=4	Rare=4	Rare=4	Rare=3
Som=2	Som=2	Som=1	Som=1	Som=0	Som=1	Som=1	Som=3	Som=1	Som=0
Oft =2	Oft =1	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0
Freq=0	Freq=1	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=2	Freq=2
Alw=2	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>197</sup>

High									
56	57	58	60	62	63	64	65	66	69
Rare=6	Rare=7	Rare=3	Rare=6	Rare=7	Rare=2	Rare=4	Rare=4	Rare=9	Rare=5
Som=6	Som=5	Som=9	Som=5	Som=2	Som=8	Som=5	Som=7	Som=2	Som=9
Oft =0	Oft =1	Oft =0	Oft =1	Oft =4	Oft =2	Oft =2	Oft =0	Oft =2	Oft =0
Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=2	Freq=2	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>195</sup>12=“Need for privacy,” 13=“Understanding how nationals interact with each other,” 15=“Understanding the way nationals think,” 16=“Cultural worldview and philosophy,” 18=“Understanding cultural values and ideals,” 22=“Understanding local politics,” 23=“Understanding national and public social functions,” 30=“Internalizing cultural values,” 31=“Internalizing behaviours,” and 32=“Initiating relationships.”

<sup>196</sup>34=“Involvement in social functions,” 35=“Understanding functional values of social and cultural activities,” 36=“Lack of contact with missionaries,” 40=“Relationships with Team-Members,” 44=“Relationships with spouse,” 45=“Relationships with one’s own children,” 46=“Relationships with the opposite sex,” 50=“Quality and extent of social life,” 54=“Comfort with national church goals and aspirations,” and 55=“Proper balance of time spent with nationals and with the family.”

<sup>197</sup>56=“Lack of motivation,” 57=“Lack of direction from mission leaders,” 58=“Poor work habits,” 60=“Insufficient Training to Do Work,” 62=“Lack of evaluation, advice, and counsel,” 63=“Balancing time in all areas of life,” 64=“Effective daily schedule,” 65=“Insufficient leisure time,” 66=“‘Politicking’ in the mission,” and 69=“Maintaining devotional habits.”

Intensity Levels of Problem Areas Con't<sup>198</sup>

Low									
56	57	58	60	62	63	64	65	66	69
Rare=6	Rare=6	Rare=6	Rare=6	Rare=4	Rare=5	Rare=5	Rare=4	Rare=5	Rare=3
Som=1	Som=1	Som=1	Som=0	Som=0	Som=2	Som=3	Som=3	Som=0	Som=5
Oft =1	Oft =1	Oft =1	Oft =0	Oft =0	Oft =1	Oft =0	Oft =1	Oft =0	Oft =0
Freq=0	Freq=1	Freq=0	Freq=1	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>199</sup>

High									
72	74	76	77	78	79	80	81	82	85
Rare=4	Rare=8	Rare=7	Rare=7	Rare=5	Rare=4	Rare=5	Rare=8	Rare=5	Rare=5
Som=5	Som=6	Som=4	Som=4	Som=7	Som=7	Som=6	Som=5	Som=6	Som=5
Oft =1	Oft =0	Oft =1	Oft =1	Oft =0	Oft =1	Oft =0	Oft =1	Oft =1	Oft =2
Freq=0	Freq=0	Freq=1	Freq=1	Freq=0	Freq=0	Freq=1	Freq=0	Freq=1	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
72	74	76	77	78	79	80	81	82	85
Rare=1	Rare=4	Rare=4	Rare=4	Rare=3	Rare=5	Rare=4	Rare=7	Rare=5	Rare=5
Som=2	Som=2	Som=1	Som=1	Som=1	Som=0	Som=0	Som=2	Som=2	Som=2
Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =0
Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas<sup>200</sup>

High			
87	90	92	93
Rare=4	Rare=2	Rare=4	Rare=4
Som=6	Som=7	Som=6	Som=5
Oft =2	Oft =1	Oft =2	Oft =1
Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=1	Alw=0	Alw=1
Low			
87	90	92	93
Rare=5	Rare=3	Rare=3	Rare=6
Som=2	Som=5	Som=6	Som=1
Oft =0	Oft =1	Oft =0	Oft =1
Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0

<sup>198</sup>56="Lack of motivation," 57="Lack of direction from mission leaders," 58="Poor work habits," 60="Insufficient Training to Do Work," 62="Lack of evaluation, advice, and counsel," 63="Balancing time in all areas of life," 64="Effective daily schedule," 65="Insufficient leisure time," 66="‘Politicking’ in the mission," and 69="Maintaining devotional habits."

<sup>199</sup>72="Demographic study for effective planning," 74="Preparing creative and culturally fitting gospel presentations," 76="Effective follow-up and discipleship," 77="Working in teams," 78="Analyzing and resolving cross-cultural conflict," 79="Planning and implementing church-planting," 80="Discovering and using resources for ministry," 81="How and when to express anger," 82="Personal depression," and 85="Fear for family security."

<sup>200</sup>87="Discontent with fellow missionaries," 90="Handling stress of extreme local poverty," 92="Physical burnout," and 93="Emotional burnout."



ND8 is *national assessment* of missionary subjects on their orientation to training and developing nationals, that is, their general concern for developing nationals, their ability to adapt arguments to national attitudes and values, their general concern for training nationals, and their ability to utilize decision-making patterns of the culture. The following profile arises from self-assessments of subjects chosen by nationals. With a t-value of -15.00 (DF=28) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p < .01$ . Standard deviation is nearly the same in both groups. Observations that follow indicate general group trends.

As with the other national assessments, there are an equal number of men and women in both high and low groups. A few missions have a larger number of missionaries in the high group than in the low, but proportions are fairly balanced. The age bracket 40-49 has seven times as many in the high category as the low, while the 60+ have none in the high but a representative proportion in the low (in terms of the total number of their category in the sample). However, in terms of the total number of their category in the sample, the first-termers have a disproportionately high number in both high and low categories. Again, marital status, childhood home location, and childhood family relationships seem to have little bearing on the differences. MK's are in both groups, with nearly twice as many in the low group. There are more church-planters in the high group and equal numbers of Christian education/ theological education teachers in both groups. Schooling and degrees are nearly parallel between both groups though the high group has more motivation for personal development. Language proficiency and goals are nearly the same in both.

The high group has more who use national mentors and who have made close friends with nationals. Both groups are the same in generally having few tensions with nationals over theological and ecclesiological issues. To high-light this balance, the high group was more often involved in family-related events, community social events, recreational activities, and everyday public events. The low group was more involved in seasonal and religious activities. However, the high group did visit nationals more often on a daily and weekly basis and perceived themselves as having more highly developed problem-solving skills.

The high group dominates the low in every ministry skill area: knowledge and application of the Bible and theology, development of skills and gifts for ministry, ability to work harmoniously with others like-gifted, ability to assess political, religious, and social context, and ability to do research and to make effective plans. In spiritual dynamics both groups are alike, though the high group does indicate more victory than

failure in thought life, motives and actions, while all but one indicated that spiritual gifts were in line with ministry. Also, more in the high group indicated that they were consistently walking in the Spirit and being led of the Spirit. The low group had more who had experienced “power encounter” in spiritual warfare. Both groups are alike in personal characteristics: curiosity (high), risk-taking (low), perseverance (high), flexibility (high), confidence (high), initiative (half and half), tactfulness (slightly higher than half and half), sociability in work (high), and empathy (high). Only in copability was the high group less likely to indicate that they had often faced experiences hard to cope with.

The difference between the two groups is seen most clearly in the extent to which they experience problems in life and ministry. The high group tends to have more difficulty in almost every area. *As a group*,<sup>201</sup> they find greater difficulty in understanding how nationals relate to each other, what their national worldview and philosophical perspectives are, in understanding their values and ideals, local politics, and public activities, understanding cultural patterns which explain behaviour, accepting cultural aesthetics, internalizing cultural values, anticipating national behaviours, and initiating relationships. While both groups are the same in getting involved in social activities and understanding the functional values of social and cultural events the high group has more problem with having missionary friends, with relating well with others on the ministry team, and to relating well their spouse, children, and members of the opposite sex. In general, they expressed more trouble with the quality and extent of their social lives.

They expressed more problem with sense of restricted independence, with maintaining effective daily schedule, with imbalance of time spent between nationals and family, work and leisure, with motivation and lack of direction from mission leaders, with poor work habits, with a sense of lack of needed training, and with lack of privacy. They had more problem than the low group in maintaining their devotional life, in doing creative evangelism and follow-up, in planning and implementing church-planting, and in discovering and using resources for ministry. Emotionally, they showed more problems than the low group with knowing how and when to express anger, with depression, with fear for family security, with anxiety in initiating relationships, with relationships with fellow missionaries and mission leaders, with the stress of seeing local poverty regularly, and with physical and emotional burn-out.

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<sup>201</sup>There is always a majority of individuals who are in the “rare” category for these problems so this must be understood in terms of the group as a whole, including those who have problem intensity from “some” to “always.”



Split-Group Profile Analysis of D30: “ Contextualized Church Development Skills”

Table 155: Split-Group Profile Analysis of D30

“Contextualized Church Development Skills”				
Variable and Instrument Item #			Var. Mean	Factor Loading
1.	Working to develop national leaders able to apply Bible to culture (B.9)		3.57	.942
2.	Working to see church developed so can move on to new ministry (B.10)		3.98	.914
3.	Able to use cultural metaphors for church development (B. 8)		2.93	.597
4.	Study, consult, self-evaluate to make sure ministry fits context (B.4)		3.11	.568
5.	Nationals adapting my work, fitting to their own system (B.7)		3.41	.563
6.	Know form of Ch. structure which is Biblical and attractive to nats. (B.2)		3.18	.560
7.	Effective communication of Bib. truth to thought patterns of culture (B.5)		3.45	.545
8.	Work well in partnership with or work well under national leadership (B.3)		3.92	.529
9.	Concern nationals integrated Bib.truth to own system of functioning (B.1)		3.60	.484

High N	High Mean	High SD	Low N	Low Mean	Low SD	DF	T-test	2-Tail P.
18	1.824	.599	18	-2.010	1.168	25.05	-12.46	.000

Personal Background

High									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =3	F =7	20-29= 0	1-4 =3	Mar.NA =15	Sub. =4	Poor= 4	Tense=1	Inc.=15	Y=5
B =0	M =11	30-39=7	5-9 =1	Mar.Nat.= 0	InCit.=0	Mod=11	OK =6	Exc.=3	
C =3		40-49=4	10-14=3	Single = 2	Farm =6	Well= 3	Clse=11		
D =5		50-59=5	15-19=2	Other = 1	SmTn=5				
E =3		60+ =2	20-24=4		Other =3				
F =4			25+ =5						
Low									
Miss.	Gender	Age	Fld.Yrs	Marital	Home	Fam.Ed.	F.Relat	F.Act.	MK
A =7	F =14	20-29= 1	1-4 =7	Mar.NA =16	Sub. =7	Poor= 3	Tense=3	Inc.=13	Y=2
B =3	M =4	30-39=9	5-9 =3	Mar.Nat.= 1	InCit.=5	Mod=14	OK =9	Exc.=5	
C =1		40-49=4	10-14=2	Single = 1	Farm =1	Well= 1	Close=6		
D =2		50-59=2	15-19=1	Other = 0	SmTn=4				
E =2		60+ =2	20-24=2		Other =1				
F =3			25+ =3						

High							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl.=2	H.S. =18	B.A. =9	Working on a degree now: 3	Little=5	1&1+=0	No =6	M.W.=0
Ch.Pl.,Hsewife=1	Tech. = 2	B.Sc. =0		Some=5	2&2+=3	Yes=12	Worse=0
Ch.Pl.,Past.C.Ed=1	C.Coll.= 0	B.Th. =1		Full = 6	3&3+=7		Same= 6
Ch.Pl./Liter.=1	B.Coll.=10	BRE =0			4&4+=5		Better=7
Chr.Ed,Counsel=1	1.Sem. =2	M.A. =0			5 =3		M.Bet=0
Chr.Ed.=1	2 Sem. =4	M.Div.=2					
Chr.Ed.,Medical=1	1 Univ.=6	M.Th. =2					
Chr.Ed.,W.Min.=2	2 Univ.=1	MRE. =2					
Chr.Ed..Music=1		Ph.D. =0					
Lang.St./Maint=1		Other =5					
Past.,Fin.Man.=1							
Th.Admin.=1							
Theo.Ed.=2							
Theo.Ed.,Admin.=1							
Transl,Maint.=1							

Low							
Present Work	Schooling	Degrees	Pres.St.	St.Adv.	L.Profic.	L.Goal	P.Status
Ch.Pl.=3	H.S. =17	B.A. =7	Working on a degree now: 2	Little=6	1&1+=3	No =7	M.W.=0
Ch.Pl.,Chr.Ed.=2	Tech. = 0	B.Sc. =2		Some=11	2&2+=2	Yes=10	Worse=2
Ch.Pl.,Ed.=1	C.Coll.= 2	B.Th. =0		Full = 0	3&3+=9		Same= 2
Ch.Pl.,Hsewife=1	B.Coll.=11	BRE =2			4&4+=1		Better=9
Chr.Ed.=2	1.Sem. =2	M.A. =0			5 =2		M.Bet=3
Counsellor=1	2 Sem. =2	M.Div.=1					
Ed.,Soc.Min.=1	1 Univ.=2	M.Th. =0					
Housewife=1	2 Univ.=0	MRE. =0					
Hsewife,Ling.=1		Ph.D. =0					
MusicAdmin.=1		Other =3					
Sec.,Counsel.=1							
Th.Ed.,Ch.Pl.=1							
Th.Teach,Ch.Pl.=1							
Theo.Ed.,Admin.=1							

### Culture Learning and Social Tensions

High								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 6	N = 7	N = 4	N = 15	N = 11	N = 8	N = 11	N = 15	N = 12
Y = 10	Y = 9	Y = 13	Y = 3	Y = 7	Y = 10	Y = 7	Y = 3	Y = 6
Low								
Lrn.Time	Mentor	Friends	IP.Rel.	Organ.	Church	Aesth.	Status	Theol.
N = 8	N = 10	N = 1	N = 17	N = 15	N = 13	N = 10	N = 15	N = 17
Y = 9	Y = 8	Y = 15	Y = 1	Y = 3	Y = 5	Y = 7	Y = 3	Y = 1

### Social Activities

High									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =3	0 =1	0 =7	0 =12	0 =3	0 =3	0 =5	Hardly =1	LessMn=0	Uncert.=2
1-4=8	1-4=3	1-4=2	1-4=2	1-4=3	1-4=1	1-4=2	Some =5	1X Mn =4	Surviv.=0
5-8=3	5-8=3	5-8=4	5-8=0	5-8=2	5-8=4	5-8=1	Quite =4	1X Wk =5	U.Dev.=3
9+=1	9+=8	9+=2	9+=0	9+=6	9+=7	9+=5	Great =3	Daily =6	A.Dev.=10
							Compl.=3		H.Dev.=1
Low									
Seas.	Fam.	Soc.	Polit.	Relig	Recr.	Publ.	Soc.Act	VisitN	Prob.Skl
0 =1	0 =1	0 =5	0 =10	0 =3	0 =0	0 =3	Hardly =2	LessMn=1	Uncert.=4
1-4=10	1-4=4	1-4=8	1-4=3	1-4=3	1-4=7	1-4=6	Some =4	1X Mn =3	Surviv.=4
5-8=5	5-8=6	5-8=1	5-8=0	5-8=3	5-8=4	5-8=3	Quite =8	1X Wk =12	U.Dev.=1
9+=1	9+=6	9+=2	9+=0	9+=5	9+=6	9+=4	Great =4	Daily =2	A.Dev.=8
							Compl.=0		H.Dev.=0

### Ministry Skills Growth

High						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =0	Little =0	Little =0	Little =3	Little =0
Some =3	Some =5	Some =4	Some =0	Some =8	Some =6	Some =7
Well =5	Well =3	Well =6	Well =7	Well =5	Well =7	Well =3
V.Well =4	V.Well =7	V.Well =5	V.Well =5	V.Well =4	V.Well =1	V.Well =6
Teach =6	Teach =3	Teach =3	Teach =6	Teach =1	Teach =1	Teach =2



Ministry Skills Growth Con't

Low						
Bib.Kn.	Bib.App.	Gifts/Sk.	Wk.w/Oth.	Assess	Research	Plan
Little =0	Little =0	Little =1	Little =0	Little =1	Little =2	Little =0
Some =5	Some =10	Some =6	Some =2	Some =8	Some =14	Some =10
Well =7	Well =2	Well =6	Well =11	Well =7	Well =2	Well =5
V.Well =0	V.Well =2	V.Well =4	V.Well =3	V.Well =2	V.Well =0	V.Well =3
Teach =5	Teach =4	Teach =1	Teach =2	Teach =0	Teach =0	Teach =0

Personal Characteristics

High									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=1	St.D=0	St.D=2	St.D=2	St.D=0	St.D=1	St.D=0	St.D=1	St.D=0	St.D=0
D. =1	D. =4	D. =11	D. =9	D. =5	D. =10	D. =9	D. =13	D. =5	D. =3
N.O=0	N.O=2	N.O=1	N.O=0	N.O=0	N.O=4	N.O=1	N.O=1	N.O=1	N.O=3
Ag.=15	Ag.=11	Ag.=4	Ag.=7	Ag.=11	Ag.=3	Ag.=8	Ag.=3	Ag.=10	Ag.=12
StA.=1	StA.=1	StA.=0	StA.=0	StA.=2	StA.=0	StA.=0	StA.=0	StA.=2	StA.=0
Low									
Curious	Risk	Persev.	Flex.	Cope.	Confid.	Initiativ	Frank.	Sociab.	Empath.
St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=0	St.D=1	St.D=0	St.D=0
D. =2	D. =3	D. =11	D. =9	D. =4	D. =11	D. =5	D. =10	D. =3	D. =0
N.O=4	N.O=1	N.O=3	N.O=3	N.O=3	N.O=1	N.O=5	N.O=2	N.O=2	N.O=3
Ag.=12	Ag.=14	Ag.=4	Ag.=6	Ag.=10	Ag.=5	Ag.=7	Ag.=3	Ag.=12	Ag.=14
StA.=0	StA.=0	StA.=0	StA.=0	StA.=0	StA.=0	StA.=0	StA.=1	StA.=0	StA.=0

Spiritual Dynamics

High									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =2	?? =0	?? =0	?? =1	?? =0	?? =2
Occ.=2	Occ. =7	D>V=5	Occ.=2	15 =5	No =1	No =1	No =0	No =0	No =6
Gen.=11	Gen =6	D/V=13	Gen.=15	30 =6	Yes=17	Part =7	Part =4	Part =5	Yes=10
Con=5	Con.=5	D<V=0	Con=1	60 =3		Most=10	Most=13	Most=13	
		C.Vic=0		60+=2					
Low									
Evang.	TrstGod	Purity	S.Contr	Prayer	SpGifts	SpEmp	SpWalk	SpFruit	SpWar
Rare=0	Rare.=0	C.Def=0	Rare=0	5 =1	?? =1	?? =0	?? =0	?? =1	?? =4
Occ.=1	Occ. =4	D>V=3	Occ.=1	15 =7	No =3	No =0	No =0	No =0	No =2
Gen.=11	Gen =13	D/V=15	Gen.=16	30 =8	Yes=14	Part =11	Part =13	Part =9	Yes=11
Con=6	Con.=1	D<V=0	Con=1	60 =1		Most=7	Most=5	Most=8	
		C.Vic=0		60+=1					

Intensity Levels of Problem Areas<sup>202</sup>

High									
3	8	10	12	14	15	16	17	18	19
Rare=8	Rare=6	Rare=7	Rare=6	Rare=9	Rare=6	Rare=7	Rare=7	Rare=8	Rare=10
Som=1	Som=2	Som=1	Som=3	Som=3	Som=5	Som=3	Som=4	Som=3	Som=2
Oft =2	Oft =0	Oft =0	Oft =0	Oft =2	Oft =3	Oft =2	Oft =2	Oft =2	Oft =1
Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>202</sup>3="Personal security," 8="Need for recreation facilities," 10="Problems with sleeping patterns," 12="Need for privacy," 14="Understanding how nationals act w/ me," 15="Understanding the way nationals think," 16="Cultural worldview & philosophy," 17="Understanding cultural customs," 18="Understanding cultural values," and 19= Communication patterns & channels."

Intensity Levels of Problem Areas Con't<sup>203</sup>

Low									
3	8	10	12	14	15	16	17	18	19
Rare=5	Rare=3	Rare=5	Rare=6	Rare=7	Rare=4	Rare=6	Rare=5	Rare=4	Rare=3
Som=7	Som=7	Som=6	Som=4	Som=7	Som=7	Som=6	Som=6	Som=9	Som=8
Oft =2	Oft =3	Oft =0	Oft =2	Oft =1	Oft =5	Oft =2	Oft =1	Oft =1	Oft =1
Freq=1	Freq=1	Freq=1	Freq=0	Freq=0	Freq=0	Freq=2	Freq=1	Freq=1	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>204</sup>

High									
23	24	30	31	32	33	34	35	38	40
Rare=7	Rare=6	Rare=5	Rare=5	Rare=9	Rare=6	Rare=3	Rare=8	Rare=6	Rare=8
Som=3	Som=5	Som=4	Som=3	Som=4	Som=5	Som=5	Som=2	Som=3	Som=4
Oft =1	Oft =2	Oft =1	Oft =3	Oft =0	Oft =1	Oft =1	Oft =0	Oft =3	Oft =0
Freq=0	Freq=0	Freq=3	Freq=0	Freq=0	Freq=0	Freq=1	Freq=1	Freq=0	Freq=1
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=1	Alw=1	Alw=0	Alw=0
Low									
23	24	30	31	32	33	34	35	38	40
Rare=6	Rare=7	Rare=2	Rare=3	Rare=7	Rare=4	Rare=8	Rare=5	Rare=12	Rare=9
Som=4	Som=6	Som=7	Som=7	Som=6	Som=7	Som=2	Som=6	Som=2	Som=2
Oft =3	Oft =3	Oft =3	Oft =2	Oft =1	Oft =2	Oft =5	Oft =3	Oft =0	Oft =1
Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

Intensity Levels of Problem Areas Con't<sup>205</sup>

High									
50	52	53	54	56	60	63	65	69	71
Rare=7	Rare=7	Rare=9	Rare=6	Rare=12	Rare=10	Rare=5	Rare=7	Rare=7	Rare=9
Som=5	Som=4	Som=1	Som=5	Som=2	Som=2	Som=5	Som=5	Som=7	Som=1
Oft =0	Oft =0	Oft =0	Oft =1	Oft =0	Oft =0	Oft =5	Oft =2	Oft =2	Oft =1
Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0	Freq=1	Freq=2	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low									
50	52	53	54	56	60	63	65	69	71
Rare=6	Rare=5	Rare=8	Rare=8	Rare=7	Rare=7	Rare=4	Rare=5	Rare=3	Rare=9
Som=5	Som=7	Som=4	Som=5	Som=7	Som=4	Som=8	Som=6	Som=9	Som=4
Oft =1	Oft =1	Oft =0	Oft =0	Oft =0	Oft =3	Oft =2	Oft =2	Oft =3	Oft =0
Freq=1	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0	Freq=0	Freq=1	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0

<sup>203</sup>3="Personal security," 8="Need for recreation facilities," 10="Problems with sleeping patterns," 12="Need for privacy," 14="Understanding how nationals act w/ me," 15="Understanding the way nationals think," 16="Cultural worldview & philosophy," 17="Understanding cultural customs," 18="Understanding cultural values," and 19= Communication patterns & channels."

<sup>204</sup>23="Understanding soc. functions," 24="Understanding non-verbal comm. behaviour," 30="Internalizing cult. values," 31="Internalizing behaviours," 32="Initiating relationships," 33="Initiating social behaviour," 34="Involvement in soc. functions," 35="Understanding functions of cult. activities," 38="Lack of contact w/ nationals," and 40="Relationships w/ Team-Members."

<sup>205</sup>50="Quality and extent of social life," 52="Extent and quality of friendships with one's own countrymen," 53="Personal independence experienced," 54="Comfort with national church goals and aspirations," 56="Lack of motivation," 60="Insufficient Training to Do Work," 63="Balancing time in all areas of life," 65="Insufficient leisure time," 69="Maintaining devotional habits," and 71="Personal church background vrs national church function."



**Intensity Levels of Problem Areas Con't<sup>206</sup>**

High								
72	74	76	80	81	83	90	92	93
Rare=4	Rare=6	Rare=9	Rare=5	Rare=11	Rare=7	Rare=6	Rare=7	Rare=9
Som=5	Som=2	Som=3	Som=4	Som=3	Som=7	Som=4	Som=6	Som=5
Oft =2	Oft =3	Oft =1	Oft =1	Oft =0	Oft =0	Oft =4	Oft =1	Oft =0
Freq=0	Freq=0	Freq=0	Freq=2	Freq=0	Freq=0	Freq=2	Freq=0	Freq=0
Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0	Alw=0
Low								
72	74	76	80	81	83	90	92	93
Rare=4	Rare=5	Rare=5	Rare=5	Rare=9	Rare=12	Rare=6	Rare=7	Rare=10
Som=2	Som=7	Som=5	Som=4	Som=6	Som=1	Som=8	Som=4	Som=2
Oft =0	Oft =1	Oft =2	Oft =0	Oft =0	Oft =0	Oft =0	Oft =1	Oft =1
Freq=0	Freq=0	Freq=1	Freq=1	Freq=0	Freq=1	Freq=0	Freq=0	Freq=0
Alw=0	Alw=0	Alw=1	Alw=0	Alw=0	Alw=0	Alw=1	Alw=0	Alw=0

Split-group profile analysis of factor D30 assesses differences between high and low groups on contextualized church development skills: the extent to which they are working to develop national leaders who are able to apply the Bible to their own culture; the extent to which they are working to develop the church so that they can move on to a new ministry; their ability to use cultural metaphors for church development; the extent to which they study, consult others, and do self-evaluation to make sure that their ministry fits the cultural context; the extent to which they see nationals adapting their work and teaching to fit their own culture; knowledge of forms of church structure which are Biblical and attractive to the thought patterns of the culture; the extent of the effectiveness of their communication of biblical truth to thought patterns of the culture; and their ability to work with and under national leadership. It must be remembered that results are based on subject self-perception rather than on any objective test. With a t-value of -12.46 (DF=25.05) the t-test confirms that distinctions between the high and low groups are highly significant, with a null-hypothesis that can be rejected at  $p<.01$ . Standard deviation is more than twice as high in the low group as in the high group. Observations that follow indicate general group trends.

There are half as many women as men in the high group and three times as many women as men in the low group. This is not as dominant an area, either in involvement or in strength for women as it is for men. Because of the knowledge and maturity required for this, the largest category in the high group (out of proportion to the actual number in the sample in comparison to the other groups) are the sixth-termers (25+ years). There

<sup>206</sup>72="Demographic study for effective planning," 74="Preparing creative and culturally fitting gospel presentations," 76="Effective follow-up and discipleship," 80="Discovering and using resources for ministry," 81="How and when to express anger," 83="Anxiety in initiating relationships with nationals," 90="Handling stress of extreme local poverty," 92="Physical burnout," and 93="Emotional burnout."

are none in the 20-29 year age bracket in the high group, and first-termers are proportionately very high in the low group. Unfortunately, the numbers of sixth-termers (25+) in the low category is also disproportionately high compared to the other categories. There are nearly three times as many MK's in the high group as in the low. While marital status and childhood home background do not seem to make much difference, those in the high group had closer family relationships when they were growing up than did those in the lower group.

Church-planters are nearly evenly represented in both groups, but as one might expect, there are nearly twice as many in Christian education/theological education in the high group as in the low. Schooling background and earned degrees are virtually the same in both groups, while the high group is more focused on continuing education (earning degrees) and taking advantage of personal development opportunities offered by the missions. Language learning proficiency is much stronger in the high group as are on-going language learning goals.

While the high group perceives themselves to engage more highly in enjoyable activities with nationals, they actually join in seasonal, family, social, political, religious, recreational, and everyday public social events to the same extent as the low group. They visit national homes more often on a daily basis but less often on a weekly basis. Interestingly, however, the high group is more likely to have tensions with nationals over organizational matters, church form and practice, and theological issues.

Appropriately, in line with the concern for church development, the high group is much stronger in every ministry skill area: knowing and being able to teach Biblical and theological content, how to apply that content to ministry, enabling others to develop gifts and skills for ministry, knowing and teaching others how to work harmoniously, and knowing and being able to teach how to assess the political, social, and religious context as well as how to research what others have done and written on ministry and prepare effective plans for ministry. They expressed less problem with national church goals and aspirations, with conflict between personal background and national church function, with motivation for ministry, with a sense of lack of training, and with doing effective follow-up (in line with their strength in teaching). They did, however, express more problem with being able to do demographic study and in finding and using local resources, nor were they stronger in effective and creative evangelism.

They are not necessarily better at learning from nationals, organizing and analyzing cultural facts, understanding cultural behavioural patterns and motivations, or accepting cultural aesthetics, but they express less trouble with understanding why nationals interact as they do and why they think (worldview and philosophy) as they do,



and they express better understanding of their customs and manners, cultural values and ideals, communication patterns and channels (including non-verbal communication), public social functions, and social behaviour and motivations. In spite of this knowledge, they showed greater trouble internalizing (identifying with) their cultural values and getting involved in social functions, or understanding the functional value of cultural social activities. They had more problems with lack of contact with nationals and with working with fellow ministry team-members, though the quality and extent of social life in general was not perceived as more of a problem than in the low group. They had more problems balancing time in all areas of life, including time spent with nationals and with family.

The high group was also stronger in being able to work with others graciously in seeing God at work in their lives, in prayer-life, in seeing correlation of their gifts to ministry, in consistent walk in the Spirit and being led of the Spirit, in Spirit-empowered ministry, and in seeing spiritual fruit in their lives. In terms of personal characteristics, there was no difference between the two groups. Both were high in curiosity, low in risk-taking, high in perseverance, half and half in flexibility, high in recognizing that they had faced situations that they had found hard to cope with in the past, high in confidence, half and half in initiative, high in tactfulness, high in sociability at work, and high in empathy. The high group is less concerned with family security, lack of recreation, need for privacy, and poor sleeping patterns. However, they did have more problems handling the stresses of dealing with local poverty, and they showed more potential for physical and emotional burnout.

### **Summary**

This chapter has provided form to the raw data collected from subjects and their colleagues (national and expatriate). Item statistics provided insight into patterns followed by respondents in answering questions. Factor analysis reduced the mass of data to a smaller number of dependent and independent variables (factors), providing also the scores for extreme end analysis. Regression analysis and discriminant analysis identified predictors relating to each of the criterion factors. Finally, split-end profile analysis provided opportunity to compare “most competent” and “least competent” subjects on specific dependent factors. The next chapter will endeavour to summarize the findings.

## CHAPTER SIX

### INTERPRETATION OF FINDINGS

The first part of this chapter will discuss the questions and hypotheses presented in chapter one in light of research findings, followed by an attempt to develop a profile or description of missionary competence arising from the predictors and criteria which were identified by categorical data. Then the implications of research findings on pre-field academics and pre-field/on-field training will be discussed. Finally, recommendations for future research will be made.

Certain basic observations need to be made before any further discussion of findings occurs. First, *all missionaries were found to be in the top level of competence in certain factors and in the bottom level in others*. None were found to be least competent in all areas and none were found to be most competent in all areas. Most factors had one or two “extreme outliers” indicating individuals who had considerably more trouble than others, but these individuals tended to be positive in other areas. Usually, negative self-assessments in certain areas were balanced by more positive assessments of the subject on the part of colleagues or nationals.

There were only four subjects who filled out questionnaires that were quite consistently negative, and only four that this author would have questioned even being on the field. In the main, the rigours of the selection processes and the difficulties of intercultural living and ministry in Latin America effectually cause attrition of individuals who are not functionally competent.<sup>1</sup> Therefore, the study findings, interpretations, and conclusions are based on comparisons between acceptably competent and strongly competent people. On the other hand, *there were a number of areas where most missionaries were weak*, some of these corresponding to previous research into problem areas that missionaries face.

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<sup>1</sup>Peace Corps and U.S. Navy studies showed that Latin America had the highest rates of attrition and/or difficulties of adjustment within their ranks from any other area of the world. While comparative studies of this among missions have not been published, it can be assumed to be the same. See Captane P. Thomson and Joseph T. English, "Premature Return of Peace Corps Volunteers," Public Health Reports 79 (1964): 1065 - 1073 and Michael F. Tucker and J. E. Schiller, "Overview Summary for an Assessment of the Screening Problem for Overseas Assignment," (Denver, Colorado: Center for Research and Education, 1975).



## Evaluation of Research Questions and Hypotheses

### Questions and Hypotheses Related to Acculturation and Competence

There were two research questions, one hypothesis, and one sub-hypothesis related to the issue of acculturation and competence. The two questions ask: "What is the relationship between ministry effectiveness and the extent to which missionaries become acculturated?" and "What is the correlation between acculturation, language learning, and socialization?" The hypotheses that result from these questions postulate that "contextualization is affected by the extent to which the missionary identifies with the culture and the people (acculturation)" and "missionaries that are actively involved socially with the people are better acculturated."

#### *Acculturation and Language Proficiency*

We first look at the relationship of acculturation and language learning. Based on the findings of the split group (extreme end) profile analysis of the four acculturation factors <sup>2</sup> it is not universally clear that individuals identified by self, nationals, and fellow missionaries as most acculturated are *necessarily higher* on the FSI (Brewster) scale in language competence. Two factors indicate high correlation; two indicate low correlation. Of the two that show high correlation between language learning and acculturation, one is based on missionary-colleague assessment and the other self-assessment related to cultural knowledge. MD4 "Active Acculturation" showed three times as many "most acculturated" individuals at the 4, 4+, and 5 FSI (Brewster) scale level. In the same way, twice as many had on-going language learning goals in the most acculturated group compared to the least acculturated group. The self assessment factor D12 also showed those most capable of "understanding cultural ethos" to be three times as many in the 4, 4+, and 5 FSI (Brewster) scale range in language proficiency and more than twice as likely to have on-going language learning goals.

On the other hand, factor D23 ("cultural/traditional personal and interpersonal values") revealed both those groups to be *identical* in language proficiency and goals. When nationals assessed missionaries on "adaptation to cultural patterns of thinking and communicating" (ND5) both most competent and least competent groups are nearly identical again in language proficiency but with the most competent nearly twice as likely to have on-going language learning goals. In general, therefore, *the data indicates that language proficiency is important for acculturation.* <sup>3</sup>

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<sup>2</sup>MD4 "Active Acculturation," D12 "Understanding of Cultural Ethos," D23 "Identification with Traditional, Personal, and Interpersonal Values," and ND5 "Adaptation to Cultural Patterns of Thinking and Communicating."

<sup>3</sup>For further discussion of the role of language on acculturation see Young Yun Kim, "Communication Patterns of Foreign Immigrants in the Process of Acculturation," Human Communication Research 4 (1977): 66-77. Young Yun Kim, "Toward an Interactive Theory of Communication-Acculturation," in Communication Yearbook III, Brent D. Ruben (ed.) Vol. III

*Acculturation and Socialization*

John Berry's study identified sense of identity with the people to be a significant factor in acculturation along with language proficiency.<sup>4</sup> The findings of this study concur, consistently showing that *those more highly acculturated also are more highly involved in social activities*. For example, of the acculturation factors, profile analysis of MD4 (colleague assessment of "Active Acculturation") showed the most acculturated group to also be much more involved in enjoyable activities with national friends, and to be more active in local seasonal functions, family-related events, recreational activities, and public social events. These findings are true for those high in the cognitive factor D12 "Understanding Cultural Ethos" and the affective factor D23 "Identification with Cultural Values."<sup>5</sup> National analysis of missionaries on "adaptation to cultural patterns of thinking and communicating" (ND5) indicates again that the most acculturated are also the most involved in social and public activities. All of these factors show individuals who also were fairly strong in their knowledge of and ability to understand cultural and individual values, behaviours, and motivations.

In only one of these factors is social interaction and acculturation questionable, the self-assessed factor D6 "Social Interaction." As expected, profile analysis showed those most involved in interaction with nationals to be higher in language proficiency, nearly twice as high in language learning goals, three times as likely to learn from national mentors, more willing to take all the time needed to learn language and culture, and more socially involved in public and cultural activities. In spite of these strengths, this group had more problems understanding cultural customs, manners, values, ideals, communication patterns and channels, and local politics. They expressed greater problems in organizing and analyzing cultural facts, understanding behavioural motivations, internalizing cultural values, and understanding the functional values of the social and cultural activities which they more

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(New Brunswick, NJ: Transaction International Communication Association, 1979), pp. 435-453. L. E. Sarbaugh, "A Systematic Framework for Analyzing Intercultural Communication," in International and Intercultural Communication Annual, Nemi C. Jain (ed.) 5 (Beverly Hills, CA: Sage Publishing, Inc., 1979), pp. 11-22. George A. Barnett and D. Lawrence Kincaid, "Cultural Convergence," in Intercultural Communication Theory, William B. Gudykunst (ed.) International and Intercultural Communication Annual, 7 (Beverly Hills, CA: Sage Publications, 1983), pp. 171-194.

<sup>4</sup>John W. Berry, "Acculturation as Varieties of Adaptation," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, 39 (Boulder, CO: Westview Press, 1980), pp. 9 - 25.

<sup>5</sup>This affective factor "Identification with Values" differs in that, while those who were high in identification were more likely to have close national friends and visit more often on a daily and weekly basis, they were less likely to be involved in broader public functions. In other words, the more the identification with national personal values, the deeper the acculturation but in a narrower sense with individuals rather than the broader culture. This may be because identification with cultural values is more psychologically intimidating. Defence may take place in the form of narrower associations with individuals and friends rather than with the larger culture.



readily attended. In other words, for all their learning and social interaction, these people appear to be less acculturated than they should be. Nor are these just new missionaries. They included individuals from all age and term groups. In that sense, this factor (D6) is a conundrum.

#### *Acculturation and Ability to Contextualize Ministry*

Because language proficiency and social interaction act as indicators of acculturation these variables will be used to identify the correlation between acculturation and the ability to contextualize ministry. Split-end profile analysis was done on five factors related to contextualized ministry. Three were based on self-assessment and two on national-assessment. As shall be seen, it is generally true that those most skilled in contextualizing their work are also more proficient in language and more socially active than those who are least skilled in contextualizing their work.

The first of the self-assessment contextualization factors, D29 “Cultural Involvement and Research Skills,” shows the high group stronger in language proficiency and on-going language-learning goals. The high group is also more willing to give time needed for learning language and culture, to use national mentors, and to have national friends. They visit more often on a daily and weekly basis and are more involved in seasonal community events, family-related events, religious activities, and recreational activities. They perceive themselves to be more highly likely to engage in enjoyable activities with nationals, to have stronger inter-personal problem-solving skills, and to have fewer tensions with nationals over inter-personal relationships and organizational issues.

The second self-assessment factor, D31 “Change-Agent Skills” which has to do with contextualized ways of introducing change, is almost identical with D29. It shows that those with high skills have considerably higher language proficiency. While both groups are the same in taking all the time needed for learning culture and language and using national mentors, the high group does make more friends and is more involved in seasonal, religious, and daily public social events, as well as daily and weekly visits in national homes. They also perceive themselves to be more adept at engaging in enjoyable activities with national friends. In the same manner, D30 “Contextualized Church-Development Skills” shows correlation between these skills and the ability to contextualize ministry, though not as strongly as D29 and D31. On the part of those high in these skills, language proficiency is much stronger and national homes are visited more often on a weekly basis, but social and public events are joined on the same basis as those less able to contextualize ministry.

The national-assessed factor ND4 “Concern for Contextualized Ministry” is a conundrum because individuals chosen as “*most concerned* with contextualizing ministry” were uniformly less proficient in language, had fewer national friends, and spent less time in

social, national family, and recreational activities. They also had more problems with every area of understanding and relating to culture than those rated least concerned for contextualized ministry. Their interpersonal skills were weaker; they had more trouble resolving intercultural conflict; and there was less satisfaction with the quality of their social life. Almost all ministry skills were weaker. Their two main strengths (perhaps the reason why nationals chose these people) is that they were concerned about ministry and spent time asking questions and trying to learn. They also showed fairly strong spiritual dynamics. The answer to this puzzle may be that *concern with contextualization*<sup>6</sup> *does not necessarily translate into ability to be effective in contextualizing ministry*. These people again come from all age and term categories and may be genuinely concerned with ministry fit.

The second national-assessed factor, ND8 “Concern for Developing Nationals,” reverts to the pattern seen earlier of higher social and cultural involvement, though language proficiency is not necessarily higher. In the main, it can be asserted from these factors that, based on language proficiency and socialization variables, ability to contextualize ministry is positively correlated to acculturation.

#### *Acculturation and Ministry Effectiveness*

In the relationship between acculturation and ministry effectiveness, profile analysis of acculturation factors indicate mixed results. For example, D23 “Identification with Traditional, Personal, and Interpersonal Values” shows the group most identified with cultural values to be actually weaker in Biblical and theological knowledge, skills for applying that knowledge, gifts for ministry, ability to assess the cultural, political, and religious context, and ability to formulate workable strategies. It would appear that affective, acculturative identification with national cultural values results in such sensitivity to the culture that a certain tentativeness is likely to occur. High group members showed less confidence in either the extent of their ministry skills or in the applicability of those skills. While curiosity, risk-taking, flexibility, copability, initiative, and empathy are the same for both groups, the group most sensitive to cultural values is somewhat less likely to persevere in a course of action, possibly fearful of running counter to cultural ministry needs. Furthermore, while this group has fewer tensions with nationals, their very sensitivity to nationals can cause enough internal pressures to hinder making close national friends. This is counterproductive to ministry, and doesn’t necessarily fit national perceptions, as the profile analysis of ND11 “Skills in Interpersonal Relationships” indicated, where nationals did not seem to mind frankness, as long as there was genuine interpersonal enjoyment. Apparently too much sensitivity to personal, interpersonal, and cultural values can be a hindrance to effective, competent ministry.

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<sup>6</sup>The variables comprising this factor were: 1) spends time with people to study cultural ways of doing things, 2) seeks advice from national co-workers, church leaders, and missionaries, and 3) is concerned that ministry fits the socio-cultural context.



MD4 “Active Acculturation” shows this same tension. While, on the one hand, the most acculturated appeared to be growing more in ministry areas related to biblical and theological knowledge, the ability to apply this knowledge to ministry, development of gifts and skills for the task, the ability to work harmoniously with others, the ability to assess the cultural, religious, political context in which they work, and ability to do research and planning, yet they acknowledged more problem with doing demographic and ethnographic study, creating effective visual aids, and doing effective follow-up and church-planting.

Those most adept in “Knowledge of Cultural Ethos” (D12) were shown to be as knowledgeable in ministry skills as those least adept but more able to apply that knowledge to the ministry situation. And national-assessment factor ND5 “Adaptation to Cultural Patterns of Thinking and Communicating” indicated that the most adapted indicate less confidence in their biblical and theological knowledge, their ability to apply that knowledge, the strength of their gifts and skills for ministry, and their ability to work harmoniously with others like-gifted. However, they do indicate greater ability to research and prepare effective plans for ministry. This makes sense in that *adaptation to a new cultural milieu may shake presuppositions and assumptions of applicability of prior training and knowledge*. However, it also results in greater ability to study the culture with a view to planning effective ministry.

In summary, *genuine acculturation may make ministry effectiveness more difficult* because previously accepted ministry knowledge, skills, and models may be found inadequate for new cultural realities. Ministry training that was effective for one culture may actually fail to prepare sufficiently for another. For example, courses in church-planting and cross-cultural evangelism tend to be theory-bound and inadequate for the realities of the field. Once on the field, missionaries may find that parameters of knowledge, assumption, and experience change so that what was understood as acceptable ministry knowledge and skill no longer fits.

#### *Other Findings on Acculturation*

John Barry found that along with language skills and sense of identity with the people, cognitive style, personality, attitudes, and acculturative stress<sup>7</sup> are also critical acculturative factors.<sup>8</sup> While this study did not measure cognitive style or acculturative stress it did pick up on some aspects of attitudes and personality. For example, with regard to

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<sup>7</sup>John W. Berry, *idem.*, pp. 17-22.

<sup>8</sup>In literature elsewhere the various potential responses from alienation to acculturation have also been identified under other categories: 1) cultural identity, 2) creative enjoyment, 3) aesthetic appreciation, 4) interpersonal relationships, and 5) levels of commitment to the people and culture. See Maureen Mansell, “Transcultural Experience and Expressive Response,” Communication Education 30 (1981): 101.

acculturation, each of the factors shows that certain personal traits were consistently true of those most acculturated. These included curiosity, perseverance and persistence, flexibility, initiative, ability to empathize, and confidence. Copability, tactfulness, and preference for working with others showed up in half of the factors measuring acculturation. 1a

Attitudes also have a bearing on acculturation. The data affirms that affective (value) identification with culture and people and enthusiastic willingness to learn (including taking all the time needed to learn) are equally important aspects of acculturation as are language skills and cognitive knowledge of the culture. Acculturation, however, is not as much a state of being as it is a level of cultural identification. There are varying levels of acculturative identification--cognitively, affectively, and behaviourally. Individuals may be more acculturated in some dimensions and less in others. For example, findings suggest that many missionaries with considerable knowledge of the culture and behavioural acculturation had greater difficulty with or less willingness to *identify with cultural values*. This bears out the research of Szapocznik and Kurtines who developed a unidimensional, psychosocial model of acculturation in which an individual's acculturation is a linear function of the amount of time that a person has been exposed to the host culture, the rate being determined by the age and sex of the person. *Behavioural acculturation was found to be correlated to age, while value acculturation was not*. Males acculturated more quickly in the behavioural dimension, while both males and females acculturated at the same pace in the value dimension.<sup>9</sup>

### Questions and Hypotheses Related to Contextualization and Competence

One research question, one hypothesis, and five sub-hypotheses on contextualization<sup>10</sup> were postulated at the beginning of this study. Two of these sub-hypotheses relating to language proficiency and social interaction were answered in the previous section. The question asked, "What is the relationship between ministry effectiveness and the extent to which ministry knowledge and activities are contextualized?" The following hypotheses were proposed:

*Hypothesis:* There is a significant positive relationship between ministry effectiveness and the extent to which ministry knowledge and skills are contextualized.

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<sup>9</sup>Jose Szapocznik and William Kurtines, "Acculturation, Biculturalism and Adjustment Among Cuban Americans," in Acculturation: Theory, Models, and Some New Findings, Amado M. Padilla (ed.) AAAS Selected Symposium Series, 39, (Boulder, CO: Westview Press, 1980), pp. 141-143. Split-group Profile analysis of D23 "Identification with Traditional, Personal, and Interpersonal Values" (Table 149, p. 367) interestingly shows that of those most identifying with cultural values, there were none in the ages 20-29 and 60+ brackets. Presumably the youngest had not had time to acculturate to cultural values, while the eldest may have been of a generation that went to the field *fearful* of value-level acculturation.

<sup>10</sup>For operationalized definition of this term see page 46.



*Sub-hypothesis 1:* Missionaries that demonstrate higher levels of "spiritual dynamic" in their ministries are more effective at contextualizing their ministries and are consequently more competent.

*Sub-hypothesis 2:* Missionaries that have high levels of satisfaction and anticipation in their ministries are more effective at contextualizing their ministries and are consequently more competent.

*Sub-hypothesis 3:* Missionaries that are students of the culture and of the national church are the most effective at contextualizing their ministries.

Contextualization of ministry was measured through three instruments: a self-assessment section ("How I Relate Ministry and Culture" Section 4, Part 2, B, questions 1-10),<sup>11</sup> a national-assessment section of questions,<sup>12</sup> and a missionary-colleague set of questions.<sup>13</sup> Eight factors form the basis for the conclusions of this section: national assessment factors ND11 "Skills in Interpersonal Relationships," ND5 "Adaptation to Cultural Patterns of Thinking and Communicating," ND4 "Concern for Contextualizing Ministry," and ND8 "Concern for Developing Nationals," as well as self-assessment variables D12 "Understanding of Cultural Ethos," D29 "Cultural Involvement and Research Skills," D31 "Change Agent Skills," and D30 "Contextualized Church Development Skills."

### *Contextualization and Study of the Culture and National Church*

The results show that there are two distinct groups, one *concerned* that ministry be contextualized but ineffective at it ("ever learning but having a hard time coming to an applicable knowledge of the truth") and the other *involved* in contextualized ministry and effective at it. The first group, concerned but ineffectual, is seen in national assessment factor ND4 "Concern for Contextualizing Ministry," focused on three variables: "spends time with people to study cultural ways of doing things," "seeks advice from national co-workers, church leaders, and missionaries," and "is concerned that ministry fits socio-cultural context." Unfortunately, individuals that nationals chose as highest in these three activities turned out to be the weakest in nearly every other area: 1) language proficiency and non-verbal skills,

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<sup>11</sup>This section had the following 9 questions (which formed one factor): 1. I am concerned that nationals integrated Biblical truth to their own system of functioning (B.1), 2. I know forms of Church structure which are Biblical and attractive to nationals (B.2), 3. I work well in partnership with or work well under national leadership (B.3), 4. I study, consult, self-evaluate to make sure ministry fits context (B.4), 5. I know how to effectively communicate Biblical truth to thought patterns of culture (B.5), 6. Nationals are adapting my work, fitting to their own system (B.7), 7. I am able to use cultural metaphors for church development (B.8), 8. I am working to develop national leaders able to apply Bible to culture (B.9), 9. I am working to see church developed so I can move on to a new ministry (B.10).

<sup>12</sup>Nationals assessed missionaries with three questions (which formed one factor): 1. Spends time with people to study cultural ways of doing things (Q.9), 2. Seeks advice from national co-workers, church leaders, and missionaries (Q.17), 3. Is concerned that ministry fits socio-cultural context (Q.21).

<sup>13</sup>Missionaries assessed their colleagues on the following three questions (which formed one factor): 1. Concern with training nationals (Q.19), 2. Studies culture; seeks advice from Brazilians and nationals (Q.14), 3. Seeks to make ministry fit cultural and sociological context (Q.20).

2) tensions over organizational issues and over status, 3) satisfying social life, number of national friends, and time spent enjoying cultural and social activities, 4) understanding cultural customs, values, motivations, behaviours, functional purposes of cultural activities, aesthetics, and patterns, 5) interpersonal relationships and conflict resolution skills, 6) conflict between personal church background and national church function, and 7) ministry skills such as demographics, evangelism, using local resources for ministry, and church-planting. One would have to assume that, in spite of their *concern* for a contextualized ministry, these people were actually less effective at it than other missionaries.

The other factors indicate that subjects actively studying the culture, consulting others, and doing self-evaluation *as well as* working to develop national leaders to apply the Bible to their own culture, working on ministry and Church structure that is both biblical and attractive to nationals, and working well in partnership with national leadership are most effective at contextualizing their work. For example, factors D29 “Cultural Involvement and Research Skills,” D31, “Change Agent Skills,” and ND8 “Concern for Developing Nationals” show clearly that study of the culture and people alone is inadequate; *active participation in the contextualive process is also necessary*.

But even here there is a difference between those who follow the formal learning/academic model and those who are involved in church development using a *formal/nonformal/informal* mix of processes. For example, D30 “Contextualized Church Development Skills” shows the most skilled group to be more highly educated and to include nearly twice as many who are involved in theological education.<sup>14</sup> Thus the data shows that this group was strong in every area, especially knowing and being able to teach biblical content and how to apply that content to ministry, developing gifting and skills for ministry in others, assessing, researching, and planning for ministry. However, they were weaker than the opposite group in being able to carry out such practical skills as demographic studies, finding and using local resources, and doing effective evangelism. They didn’t necessarily learn more readily from nationals, understand cultural behavioural and motivational patterns, get more involved in social activities, or identify with (internalize) cultural values. Thus it would appear that the educators in the “most competent” group tend to be less effective at being able to contextualize ministry skills and identify with the people much beyond the classroom context.

In light of these findings, the research question asking the relationship between ministry effectiveness and contextualization needs to be broadened to the following questions: “What are the relationships of knowledge and learning approaches, motivation and desire, and ministry skills for effective contextualization? How much of each is needed for

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<sup>14</sup>Church-planters are evenly represented between those most skilled and those least skilled.



effective contextualization to take place?” “Does the present emphasis on contextualization in missiological training and publishing produce the desire but not the know-how for contextualized ministry to take place?” “To what extent do personality and spiritual dynamic affect the ability to contextualize ministry?” “How do types of formalized ministries affect the extent to which contextualization can take place? What are the hinderences to contextualized ministry within academics? within types/models of church-planting? within support ministries?”

It is clear that desire to learn from nationals and a propensity to ask questions of them and fellow missionaries does not mean that effective contextualization will take place. It may indicate a recognized lack of training and skills. It may be a response of recognition to the need to contextualize but without a clear idea of how to do it. Or it may indicate a lack of ability to synthesize knowledge, skills, contextual realities, the giftings and skills of others, and the enabling and directing of the Spirit of God for ministry. Some of the problem stems from training. Traditional formal academics tend to be strong on theory but weak on skills development, generally being ineffectual in preparing people beforehand for the realities of the field, especially in specific context-directed skills. It also is weak in providing effectual working models for ministry.

#### *Personal Satisfaction and Contextualization*

There is very little evidence that missionaries who have positive expectations and are satisfied with their ministry are necessarily better at contextualizing their ministry. A comparison of satisfaction quotients on variables D12, D29, D31, D30, ND4, and ND5 shows very little difference between those “most competence” and those “least competent” in these factors. There are a few exceptions, but even these show very little difference between the two groups. The most competent in cultural involvement and research (D29) showed a few with greater dissatisfaction with language and culture learning progress and with health. Those strongest in “change-agent skills” (D31) showed a few with greater dissatisfaction with missionary relationships and life in general. The variable with the greatest number of dissatisfied on the part of the “most competent” was D30, “contextualized church development skills” where missionary relationships (all shown to be a greater difficulty under “problems”), relationships with nationals, quality of work, and language and culture learning progress, showed a few more who were dissatisfied than did the lowest group. Thus, personal satisfaction with life and ministry does not necessarily indicate that one is better acculturated or better able to contextualize work.

#### *Personal Characteristics, Spiritual Dynamics, and Contextualization*

Personal characteristics do not clearly correlate to contextualization. In most factors, characteristics were nearly the same for most competent and least competent groups. Only in

D12 “Understanding Cultural Ethos and Social Structure,” D29 “Cultural Involvement and Research Skills,” and D31 “Change-Agent Skills” was there a distinction between the two groups. In the former, D12, those strongest in understanding were also stronger in perseverance, flexibility, confidence, initiative, and preference for working with others. In D31 flexibility, confidence, tactfulness, and empathy stand out. Finally, in D29, two characteristics are distinct--perseverance and flexibility.

Spiritual dynamics, on the other hand, do seem to be more significant in determining the likelihood of skill in contextualization. The most competent groups rated more highly on the following variables: ND11--self-control; ND4--evangelistic burden, ability to trust God’s working in other people’s lives, prayer-life, correlation of spiritual gifts to ministry, and a walk led of the Spirit; ND8--more victory than defeat in thought life and motives and a walk led of the Spirit; D29 and D30--ability to trust God’s working in other people’s lives, prayer-life, correlation of spiritual gifts to ministry, sense of being spiritually empowered, a walk led of the Spirit, and the fruit of the Spirit in daily life; and D31--more victory than defeat in thought life and motives. Otherwise, top and bottom groups scored nearly the same on all spiritual characteristics.

### **Questions and Hypotheses Related to the Influence of Education on Competence**

One of the research questions asks, “What is the relationship between prior education/training and ministry effectiveness?” The results of profile analysis on the influence of education on competence is one of the most surprising findings. As already intimated, *education seems to have far less bearing on competence than one would assume*. The sample included individuals who 1) had only finished high school, 2) had one or more undergraduate degree (theological and/or secular), 3) one or more graduate degrees (theological and/or secular), and 4) post-graduate degrees (Ph.D and D.Ed.; none with D.Miss., D.Th., or D.Min.). Yet consistently in all factors except for D30, top and bottom groups had nearly identical numbers of individuals from each of these categories and the numbers of degrees were also evenly represented. Only D30 had significantly more Bible College/Seminary trained individuals and more academic degrees in the top group.

Pursuit of further training and self-development from courses and materials offered by missions was generally equally represented between top and bottom groups in all factors as well. Those who continued formal graduate and post-graduate education were asked to rate the extent to which their studies gave the additional knowledge and skills for improving ministry. The following breakdowns indicate that these studies were not an overwhelming success. Only 32.43% indicated that their studies were better than helpful.



Table 156: Item Statistics on Value of Graduate and Post-Graduate Studies

exactly what was needed	12	32.43%
helpful	20	54.05%
fell short of real needs	3	8.11%
almost useless	0	0.00%
uncertain	2	5.41%

While most factors showed missionaries continuing to work on degrees these were very few, while from factor to factor generally fewer than one-third in either category were taking full advantage of the on-going personal learning and development opportunities being offered by missions.

Questions and Hypotheses Related to the Influence of Personal Traits and Spiritual Dynamics on Competence<sup>15</sup>

Both step-wise regression analysis and discriminant analysis analysis show all personal and spiritual dynamic characteristics included in the study were predictors of most criteria. Profile analysis indicated less diversity in personality characteristics between high, middle, and low groups than it did for spiritual characteristics. While that reduces the certainty of being able to refer to these characteristics as predictors of specific criteria, it does indicate that all are important to cross-cultural ministry, though they differ in the level of significance.

The overall pattern shows that subjects were 1) very high in perseverance, 2) high in curiosity, flexibility, initiative, risk-taking, and empathy, and 3) moderately high in preference for working with others rather than alone, in tactfulness,<sup>16</sup> and in acknowledging that there were many situations that they had had problems coping with. Even more important to competence than personality traits were all areas of spiritual dynamics. Again, overall patterns showed most subjects to be 1) high in ability to trust God to work in other people’s lives, correlation of spiritual gifts to work, sense of empowering by the Holy Spirit, consistency of walking in the Spirit and being led by the Spirit, and the development of spiritual fruit in the life, 2) moderately high in evangelistic burden, spiritual warfare, and self control, and 3) low in prayer life and victory/purity in thought life, motives, and actions.

<sup>15</sup>Related to research questions 5, 6, and 7 “How do ‘traits’ compare to prior education and training in their affect on ministry competence?” “Is there a correlation between self-rated spiritual dynamics, personal and ministry growth, and ministry effectiveness?” and “What predictors identify individuals who will be most effective in long-term ministry-skills?”

<sup>16</sup>Missionaries tended to rate themselves as tactful rather than frank, in contrast to the findings of Hawes and Kealey, whose CIDA subjects were more prone to rate themselves as frank. On the other hand, nationals assessing missionaries (ND11) chose for interpersonal skills confidence as many who were frank as who were tactful. They seemed more interested in the quality, depth, and genuineness of friendships than in tactfulness. Too much tact may result in lack of initiative, risk-taking, and tentativeness resulting in constricted freedom with people and in ministry (suggested by findings of D23).

**Summary on Research Questions and Hypotheses**

The following points summarize the findings as they relate to the research questions and hypotheses.

1. *Cognitive* knowledge of the culture as well as *affective* identification with culture and people and enthusiastic willingness to learn (that is, taking all the time needed to learn) are necessary for acculturation to occur.
2. Language proficiency and social interaction both correlate significantly to the ability to become acculturated as well as to be able to contextualize one's work.
3. Concern for contextualizing does not necessarily translate into the ability to contextualize one's work. Concern (desire) must also include necessary skills, such as language proficiency, social interaction, perception of contextual realities (ie. cultural knowledge and insight), ability and desire to work with nationals, ministry skills (sensitively used), ability to train and encourage national leadership, ability to hear and learn from nationals, and sensitivity to the leading of the Spirit of God.
4. Ability to contextualize work is dependent in part on the extent to which one has acculturated.
5. In acculturation, *too much sensitivity* to culture (that is, failure to balance personal realities, the cultural ethos, and one's calling) may actually inhibit ability to apply ministry skills effectively.
6. Acculturation is multi-dimensional--cognitive, affective, and behavioural. The rate of acculturation proceeds differently in each of these areas, most rapidly in cognitive and behavioural dimensions and most slowly in affective (value and emotive) dimensions.
7. Academic knowledge of biblical, systematic, and practical theology does not necessarily indicate ability to effectively apply that knowledge to the ministry context.
8. Satisfaction with ministry is not an adequate indicator of ministry effectiveness.
9. Certain personality characteristics appear to enhance ability to be competent. These include perseverance, flexibility, confidence, initiative, sociability, empathy, and curiosity.
10. Spiritual dynamics appear to be even more important to competence than do personality characteristics. The most common ones include: evangelistic burden, ability to trust God to work in other people's lives, prayer-life, self-control, walking in the Spirit, being led of the Spirit, being empowered by the Spirit, having the fruit of the Spirit in daily life, having and using the gifts of the Spirit for ministry, and having victory in thought life, motives, and behaviour.



### Criteria of Missionary Competence

Dependent variables were included in the instruments on the basis of prior research and theoretical models. Reliability valuations of factors developed from these variables had to be made before they could be accepted as criteria of missionary competence. These reliability valuations on each factor include two items: 1) a significant T-test ( $p < .01$ ) distinction between “most competent” from “least competent” group<sup>17</sup> and 2) the “utility” of the factor on the basis of its correlation with no fewer than ten predictor variables.<sup>18</sup> Table 157 shows a listing of the criterion factors which fit these two requirements, including a listing of inter-rater reliability intercorrelations between self-rated scales and national-rated or missionary-colleague rated scales in factors where this is applicable.<sup>19</sup>

**Table 157: Validity of Criteria Factors Related to Cross-Cultural Ministry Competence**

Criteria Factors	T-Tests <sup>20</sup>	Utility <sup>21</sup>	IRR <sup>22</sup>
(D1) Adjustment to Culture and Ministry	-12.94	16	Nat.
(D2) Physical and Psychological Health	-12.94	26	n/a
(D3) Satisfaction with Ministry Development/Progress	-14.61	14	Nat.
(D4) Interpersonal Interaction with Nationals	-18.47	17	Nat./MC
(D5) Satisfaction with/Commitment to Culture and Ministry	-16.23	18	Nat.
(D6) Satisfaction with Social Interaction	-15.49	23	Nat./MC
(D7) Adequate Social Interaction	-15.68	37	n/a
(D8) Commitment to Learning Culture and Country	-17.72	17	Nat.
(D9) Factual Knowledge of Economic and Political Structures	-16.96	18	n/a
(D10) Factual Knowledge of Belief Structures	-11.98	16	Nat.
(D11) Factual Knowledge of Sociological Structures	-13.22	29	n/a
(D12) Understanding of Cultural Ethos and Social Structure	-14.05	26	n/a
(D13) Understanding of Cult. Economic & Political Structure	-19.40	12	n/a
(D14) Understanding of History's Influence on Culture	-9.80	16	n/a
(D15) Insight into the Culture's Personality	-12.72	28	n/a
(D16) Insight into Communicat. through Accepted Structures	-12.78	15	n/a
(D17) Insight into Cultural Values/Beliefs	-12.67	32	n/a
(D18) Appreciation for Social Role Values	-16.85	21	n/a

<sup>17</sup>T-tests are significant at 6.00 or higher. All factors shown here have a fairly high significance on that basis.

<sup>18</sup>See pp. 349-351 for a summary of step-wise regression and discriminant analysis correlation totals between dependent and independent factors.

<sup>19</sup>Based on Pearson Product-Moment Correlations between equivalent self-rated and equivalent national- or colleague-rated dependent variables.

<sup>20</sup>For all T-Tests  $p < .01$ . The negative signs in front of the T-test values only indicate that the “least competent” (negative) groups had a higher mean than the “most competent” group. All of these values indicate very high significance.

<sup>21</sup>This includes the number of times that predictor factors correlated to the criterion factor. Numbers based only on discriminant analysis totals.

<sup>22</sup>Inter-rater Reliability (IRR). “n/a” means that the variables were not rated by observers. “Nat.” means that the variables were rated by nationals. “MC” means that the variables were rated by missionary colleagues. The dot (“•”) indicates that these items were factors produced by the observers and inter-rater reliability does not relate to them.

**Table 157: Validity of Criteria Factors Related to  
Cross-Cultural Ministry Competence Con't**

Criteria Factors	T-Tests	Utility	IRR
(D19) Appreciation for Cultural Fine Arts	-18.11	18	Nat.
(D20) Appreciation for Social Customs	-14.66	18	Nat.
(D21) Appreciation for Language	-16.43	15	Nat.
(D22) Identification with Acceptable Social Fit	-25.67	29	Nat.
(D23) Identification with Trad., Personal, Interpers. Values	-20.91	14	n/a
(D24) Identification with Social Communication Patterns	-17.90	21	Nat.
(D25) Identification with Social Role Values	-16.31	24	n/a
(D26) Enjoyment of Social Activities/Interaction	-15.56	11	n/a
(D27) Enjoyment of National Recreational Activities	-17.24	37	Nat.
(D28) Enjoyment of National Arts/Hobbies	-21.46	29	n/a
(D29) Cultural Involvement and Research Skills	-15.04	28	Nat.
(D30) Contextualized Church Development Skills	-12.46	18	Nat./MC
(D31) Change-Agent Skills	-17.24	19	Nat.
(MD1) Contextualization of Ministry	-18.54	31	•
(MD2) Commitment to Creative/Viable Ministry	-11.70	38	•
(MD3) Adequate Ministry Education/Training	-11.10	29	•
(MD4) Active Acculturation	-18.40	34	•
(ND1) Adjustment to Culture and Ministry	-22.19	18	•
(ND2) Ministry Effectiveness	-12.50	29	•
(ND3) Psychological Health	-19.91	27	•
(ND4) Concern for Contextualizing Ministry	-14.93	17	•
(ND5) Adaptation to Cult. Patterns of Thinking/Communicat.	-13.93	30	•
(ND6) Involvement with Culture and People	-14.79	22	•
(ND7) Psychological <i>Acceptance</i> of People and Culture	-14.86	17	•
(ND8) Skills for Developing Nationals	-16.27	30	•
(ND9) Knowledge of Country and Language	-13.61	21	•
(ND10) Conflict Resolution Skills	-14.74	29	•
(ND11) Skills in Interpersonal Relationships	-17.05	13	•
(ND12) Adaptation to Cultural Life-style	-16.06	17	•

The T-tests and “utility” valuation procedures accept the validity of all dependent factors. On this basis, all will be used in developing a profile of missionary competence. These factors can be grouped into nine categories which include cognitive, affective, and behavioural scales. The nine categories are: *adequate preparation, adjustment, satisfaction, social activities, cognitive acculturation, affective acculturation, behavioural acculturation, acculturation in ministry skills* (ability to contextualize work), and *ministry skills* (or professional competence). The nine categories in turn fit within seven dimensions:

- 1) indicators of adequate preparation and adjustment to cross-cultural life and ministry,
- 2) cognitive acculturation, 3) affective acculturation, 4) behavioural acculturation, 5) ministry skills acculturation (contextualization), 6) ministry skills/professional competence, and 7) social interaction. All three sources (missionary, national, and missionary-colleague) produced factors which fit into most of these dimensions. Table 156 compares sources of these criteria of competence from self, national, and missionary colleague scales.



Table 158: Comparison of Three Sources of Criteria of Missionary Cross-Cultural Ministry Competence

Missionary Colleague	National	Missionary
1. Adequate Preparation (MD3)	Life/Ministry Adjustment (ND1)	Life/Ministry Adjustment (D1, D2, D3, D5)
2.	Cognitive Acculturation (ND9)	Cognitive Acculturation (D8-D17)
3. Affective Acculturation (MD4)	Affective Acculturation (ND3, ND7)	Affective Acculturation (D18-D28)
4.	Behavioural Acculturation (ND5, ND12)	Behavioural Acculturation (D26-D28)
5. Ministry Acculturation: Contextualization (MD1)	Ministry Acculturation: Contextualization (ND2, ND4, ND8)	Ministry Acculturation: Contextualization (D29-D31)
6. Ministry Skills/ Professional Competence (MD2)	Ministry Skills/ Professional Competence (ND8)	Ministry Skills/ Professional Competence (D30-D31, ID28-ID30)
7. Social Interaction (MD4)	Social Interaction (ND6, ND10, ND11)	Social Interaction (D4, D6, D7)

Partial Definition of Missionary Cross-Cultural Competence Based on Criteria

On the basis of these forty-seven factors and the dimensions that they fit, it is possible to come up with the following partial definition of missionary competence. It is partial because a full definition requires inclusion of independent factors which also influence and affect competence, including personality characteristics, spiritual dynamics, personal and family needs and stressors, and personal growth and development. Independent factors will be included later.

A competent missionary has both training and natural abilities which enable him or her to: 1) *effectively adjust* to everything in the new cultural context, 2) *become personally acculturated* through acquiring the language, learning about the culture, adapting behaviour to the culture, and internalizing cultural values which are not at variance with biblical values, 3) *socially interact with people*, and 4) *acculturate ministry skills* to the ministry context.

Descriptions of Competence Dimensions

The first dimension relates to *ministry readiness* and especially covers pre-field and first one or two year time frames. It can be defined as the requisite training, capacity to adjust, and personal satisfaction with life and ministry which psychologically and practically enables a missionary to be competent. The indicators of *ministry readiness* include:

- 1) Demonstration of adequate training for ministry,
- 2) Personal and family adjustment to the culture and context
- 3) Satisfaction with life and ministry:
  - health
  - relationships with nationals and missionaries

- progress of language learning
- type of ministry involvement as well as its quality and sense of development
- life in general

The second dimension relates to *cognitive acculturation*, the extent to which an individual learns about the structures of a country and culture as well as its ethos and personality.<sup>23</sup> The indicators of *cognitive acculturation* include:

- 1) Knowledge about the structures of a country and culture:
  - Macro- and micro-political and authority structures
  - Macro- and micro-economic structures
  - History of the people and culture
  - Belief structures:
    - oral and written traditions of a culture
    - religion and cosmology
  - Social Structures:
    - kin-relationships
    - child-rearing/socialization processes
    - societal communication channels
    - life-cycle rituals
  - Material Culture
  - Aesthetic Culture: art, music, literature, etc.
- 2) Knowledge of the ethos and personality of the culture:
  - Influence of Cultural Values
    - the impact the traditions of the culture have made on its ethos
    - basic assumptions and values generated by religious beliefs
    - the world-view of the people
    - the cultural character of the people (motives, traits, beliefs, etc.)
    - how cultural values are seen in the material culture
  - Influence of Religious Beliefs
    - how art, lit., and music express needs and longings of the people
    - how rituals fit patterns of beliefs
    - how oral and written traditions fit to form cultural "truths"
    - how patterns of religious thought impact life of the people
  - Influence of Social Processes
    - communication and relationships in kinship patterns
    - why people act as they do as a result of socialization processes
    - how kin. patterns present ways for diffusion of innovation & change
    - which people constitute the fringe & which the core of society
  - Influence of Economic and Political Structures
    - relationships of local and national economic structures
    - how decisions are made, communicated, and exercised
    - how the history of the people has influenced their culture
    - communication flow within, out of, and into the culture
    - accepted and effective communication channels and media
    - accepted patterns for relating to authority structures

The third dimension requires *affective (emotive and valuative) acculturation*.

Missionaries identified this as the most difficult of the levels of acculturation because it requires personal identification with the culture first through appreciation of social roles, cultural fine arts, and social customs, then through identification with values and social

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<sup>23</sup>There were no questions in the missionary-colleague questionnaires specific to knowledge, though adequate knowledge was assumed in some of the questions (for example, question 14, "This person makes efforts to make his or her ministry effective by studying the culture and national church...").



patterns of inter-relationships within the culture. In some cases, the difficulty in affective acculturation occurred from the sense that value clashes were not simply intercultural but spiritual, the confrontation of a biblical worldview against cultural patterns arising out of sinful and destructive cultural values. The indicators of *affective acculturation* include:

1) Appreciation of the Culture

- Social Roles
  - male and female roles and status
  - authority and individualism/collectivism
- Cultural Fine Arts
  - language, literature, art
  - traditions and ceremonies
  - music
- Social Customs
  - social manners
  - dress
  - values of honour and self-respect
  - customs related to child-rearing
  - customs arising from traditions

2) Values and social patterns of inter-relationships

- Values
  - values of the culture arising from traditions
  - values of the culture related to honour and self-respect
  - values related to male and female roles and status
  - patterns related to authority, decision-making, and individualism
- Social Communication Patterns
  - acceptable social fit (patterns of living like the people)
  - social patterns of inter-personal relationship
  - patterns by which people handle conflict
  - use of acceptable and effective media methods
  - oral communication patterns

The fourth dimension is competent *behavioural acculturation*. This includes the ability to enjoy social activities and interaction, demonstrate cultural customs in daily behaviour, and enjoy recreation and traditional activities and ceremonies with national friends. Some of these overlap with the seventh dimension, *social interaction*, but this is unavoidable since behavioural acculturation is only adequately demonstrated in intercultural interaction.<sup>24</sup> The indicators of *behavioural acculturation* include one's ability to:

- 1) Enjoy acting politely and "correctly" in social interaction
- 2) Enjoy expressing cultural customs in my behaviour
- 3) Enjoy joking and teasing relationships with nationals
- 4) Enjoy balancing "work" and "play" the way nationals do
- 5) Enjoy going to various recreational places (parks, stadia, concerts, etc.)
- 6) Enjoy participating in traditional ceremonies with national friends
- 7) Enjoy learning from mentors in the culture
- 8) Enjoy playing instrument, painting, making pottery, etc.

The fifth dimension is concerned about competence in *acculturating ministry skills* (that is, in contextualizing ministry). Competence in this dimension includes both

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<sup>24</sup>There were no questions in the missionary-colleague questionnaire specific to acculturated behaviour.

motivations (concern) to adequately contextualize work and skills in doing so. These skills include three areas: ability to research, ability to bring about change in culturally acceptable ways, and ability to train and develop nationals in ways that fit the cultural and sociological context and allow for viable church growth and development.

1) Ability to do research:

- to discriminate homogeneous groups of people in the culture
- to understand cultural forms of decision-making
- to understand the content and value of cultural definitions of moral standards
- ability to study, consult, self-evaluate to make sure ministry fits context
- knowledge of form of Church structure which is Biblical and attractive to nationals
- ability to describe changes in cultural values and why changes taking place

2) Ability to bring about change in culturally acceptable ways:

- to introduce new concept into community through appropriate channels
- to adapt an argument to national attitudes and values
- to identify unofficial local leaders
- to utilize family linkages for ministry contacts
- to relate to individual and cultural felt needs for ministry
- to use non-verbal communication effectively

3) Ability to train and develop nationals for culturally viable church growth:

- ability to develop national leaders who are able to apply the Bible to culture
- ability to see church developed so one can move on to new ministry
- ability to use cultural metaphors for church development
- ability to effectively communicate Biblical truth to thought patterns of culture
- ability to work well in partnership with or work well under national leadership
- to be concerned that nationals integrate Biblical truth to their own system of functioning
- to show evidence that nationals are adapting missionary's work to their own system
- "equal" rather than "fatherly" interaction with nationals

The sixth dimension is *professional competence*, that is, ministry skills common to any context. A number of ministry skills were included in independent variables (in terms of "growth") to see how they related as necessary predictors of cross-cultural effectiveness.<sup>25</sup> The skills were all highly significant as predictors, but could also be included here as necessary criteria. The indicators of *professional competence* include the abilities:

- 1) To relate well with people,
- 2) To communicate clearly and effectively to people's thought patterns and in appropriate ways,
- 3) To relate to individual and cultural felt-needs,
- 4) To utilize family linkages for ministry contacts,
- 5) To recognize "unofficial" leaders who influence decision-making,
- 6) To know how to use decision-making processes,
- 7) To apply biblical and theological knowledge to ministry,
- 8) To develop personal gifts and skills necessary for the task,
- 9) To research the thinking and work of others in similar ministry to learn from their failures and successes,

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<sup>25</sup>It is possible for skills to be both predictors and criteria in the same way that social interaction skills can be both predictors and criteria of effectiveness. In this case, the *growth and development* of ministry skills was the predictive element. Where growth had not occurred, it was assumed there would be negative correlation.



- 10) To assess (research) the cultural, religious, and political context in which ministry is being undertaken, and
- 11) To formulate effective strategies and plans with others

The seventh dimension measures competence in *social interaction*. The findings of this study validate the results of the CIDA study which show that “intercultural interaction is the foundation of effective transfer of [the subject’s knowledge]. Nationals consider it the essence of overseas effectiveness among foreign expatriates.”<sup>26</sup> The indicators of *social interaction* include:

- 1) The extent and number of times that missionaries visit nationals in their homes, enjoy activities with nationals and have national friends,
- 2) The extent to which missionaries get involved in social and cultural activities,
- 3) The extent to which missionaries seek advice from nationals,
- 4) Skill in conflict resolution,
- 5) The extent to which missionaries have joking and teasing relationships with nationals,
- 6) The extent to which missionaries understand and relate to nationals *vis a vis* worldview, values, and beliefs, and
- 7) The extent to which missionaries work well with national church leaders.

These seven dimensions with their indicators are criteria of cross-cultural ministry competence as validated within the confines and included variables of this study. This does not mean these are the only criteria of missionary cross-cultural competence, but that these have strong empirical validations. Next we review the predictors which were shown to be significantly correlated to these criteria, and as such are also necessary to a global profile of missionary competence.

### Predictors of Missionary Competence

Discriminant analysis produced a more extensive list of predictors *per* criterion than step-wise regression analysis because it was based on comparison of extreme ends of each dependent factor rather than on the total subject population. As already seen, the significance of the distinction between these two groups on each factor was verified by their high T-test values (see Table 155). Care must be taken, however, with interpretation of every predictor factor. For one thing, the questions which formed some variables were actually written in reverse.<sup>27</sup> For another, a significantly high Pearson Product-Moment Correlation could reverse the predictor. Thirdly, the negative or positive loading of the high and low centroids

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<sup>26</sup>Hawes, Frank and Kealey, Daniel J., Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment, (Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979), p. 159.

<sup>27</sup>For example, ID9, “Initiative” had two of its variables written the opposite direction: “Given a choice I prefer to let others take the initiative” and “I am generally not one of the first to suggest a plan of action,” while the third was written the correct direction, “In a new situation, I am one of the first to act or make suggestions.” The first two had high positive (+) factor loadings while the third had a high negative (-) loading indicating that all were going the same direction. In relating this predictor “initiative” to the centroids, a negative correlation would indicate that the missionary was positive in “initiative” (if the high centroid was positive), while a positive correlation would indicate a negative orientation (if the high centroid was positive). This would again be reversed if the low centroid was positive.

would determine the direction of the predictor. In Tables 97 to 143 (pp. 301-341) the last column takes into account all effects which determine the negative or positive orientation of each predictor except for its relationship to centroids.

The data was so complex that there were as many predictors oriented to the less competent group as there were to the most competent. Nevertheless, positive correlation of independent factors occurred often enough to verify all independent variables as positive predictors. Because this is a general summary of findings on predictors it will be considered adequate at this point to simply utilize these predictors in accordance with the commonality of their variable content rather than specifically in their relationship to specific criteria. The following table shows which factors (according to their themes) came from self-assessment and colleague assessment questionnaires.

Table 159: Comparison of Two Sources of Predictors of Missionary Cross-Cultural Ministry Competence<sup>28</sup>

	Missionary	Missionary Colleague
1.	Characteristics/Traits (ID4-13, ID15 ID17-18, ID26)	Characteristics/Traits (MID2-MID4) (MID6)
2.	Spiritual Dynamics (ID33-ID40)	
3.	Social Skills (ID2-ID3, ID14, ID16 ID31-ID32)	Social Skills (MID1)
4.	Learning/Growth (ID22-ID24, ID25 ID27-ID30)	
5.	Stable Family Life (ID1, ID19)	Stable Family Life (MID5)

*Partial Definition of Missionary Cross-Cultural Competence Based on Predictors*

Because personality characteristics, spiritual dynamics, personal and family needs, and personal growth and development influence missionary competence, a partial definition based on these can be developed. This definition will be combined with the criterion-based definition when the complete profile is developed.

A competent missionary not only has requisite character traits and spiritual dynamics but also contextual sensitivity (expressed through efficient social skills) which enable him or her to be cross-culturally competent in life, interaction, and ministry. This competence is possible in part because there is satisfaction with family life (stability, communication, interaction, and children’s development) and there is on-going personal growth in all areas of life and ministry (both in knowledge and skills).

<sup>28</sup>Only two predictor variables were in the national questionnaires and were not included with the other predictors.



*Descriptions of Predictor Dimensions*

The first dimension focuses on competency-related *characteristics* with the following indicators:

1) Learning-oriented characteristics:

- *Analytical perceptiveness and curiosity*, shown through interest and willingness to study alternative points of view, new ideas, and other beliefs
- *Risk-taking and openness to people and experiences* demonstrated through willingness to be with people who's views and values differ and through willingness to take appropriate risks in decision-making
- *Confidence* resulting in active cultural and social involvement.

2) Other-oriented characteristics:

- *Respect for others and their culture and values*
- *Interpersonal Interest* shown in willingness to let others know that one is interested in them, acknowledging and complementing others, attentiveness to others
- *Sociability* demonstrated in preference for working with others rather than alone
- *Situational sensitivity* in recognizing cultural, political, social, and personal realities, ideals, values, desires and knowing how to respond properly to these
- Balance of *tactfulness* and *frankness* in sensitivity yet openness in dealing with others
- *Empathy* in being able to perceive other's feelings and needs and properly respond to them.

3) Action-oriented characteristics:

- *Confidence* in personal skills and judgement
- *Taking initiative*, being one of the first to act, make suggestions, plan actions
- *Perseverance, persistence, and diligence* in the face of complicated and tiring situations
- *Self-control and discipline* in completing work, maintaining lines of communication with family, growing spiritually, and emotional control
- *Flexibility and copability* in all situations
- *Prudence and discretion* as appropriate in light of social, political, and other contextual realities.

The second dimension relates to *spiritual dynamics* which split-end profile analysis has shown to be essential for cross-cultural ministry competence. The indicators of *spiritual dynamics* include:

1) A life *controlled by the Holy Spirit* and demonstrated by:

- Holiness of life
  - daily confession of sin to God as part of life and ministry
  - purity of thought-life, motives, and actions
  - extent of personal self-control
  - being perceived as a "godly" person by the community
- Maintenance of spiritual life through obedience and daily devotional life (communion with God)
- Daily life characterized by a "walk in the Spirit"
- Daily life characterized by the "fruit of the Spirit"
- Ministry empowered by the Holy Spirit
- Spiritual gifting for ministry
- Experience of "power encounter" (ie. conflict with spiritual demonic forces<sup>29</sup>)

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<sup>29</sup>See Ephesians 6: 10-20.

- 2) Dependence on God shown by:
  - A life of faith in daily ministry
  - Confidence in God's sovereign working in the lives of others
  - A dynamic prayer life
  - Dependence on the Holy Spirit to guide in problems and new tasks
- 3) Concern for People characterized by:
  - Depth of personal (evangelistic) burden for the "lost"
  - Willingness to face persecution with national believers
  - Willingness to be involved in mediating disputes (being a peace-maker)

The third dimension is the critical capacity to be socially adroit, skilled at reading social situations, and able to adjust behaviour to meet the needs of the situation. *Social Interpersonal Skills* include the following indicators:

- 1) Attitude skills:
  - Respect for others through demonstrating their value and showing interest in them.
  - Not opinionated
  - Willingness to maintain smooth relations with others (reduce conflict)
  - Friendliness
  - Openness through willingness to learn, ask questions, respond to people
- 2) Communication Skills
  - Sensitivity shown through tact; openness and honesty shown through frankness
  - Acknowledgement of others; willingness and skills in listening
  - Friendliness
  - Verbal and non-verbal communication skills
- 3) Interaction Skills
  - Ability to build relationships
  - Ability to work well with people
  - Ability to respond flexibly to others
  - Willingness to mediate disputes; make sure no faults between self and others.

A fourth dimension and one that has considerable impact on the continued development of cross-cultural ministry competence is *personal growth* in all areas of life and ministry. These areas include:

- 1) Development of language and communication skills
- 2) Development of interpersonal skills
- 3) Personal intellectual development in a wide range of areas not necessarily specific to ministry
- 4) Development of personal confidence
- 5) Development of knowledge, skills, and gifts for ministry:
  - Biblical, systematic, and practical theology
  - Knowledge and skills for applying these theologies to ministry within the cross-cultural context
  - Development of personal gifts for ministry
- 6) Development of capacity to research and strategize
  - Ability to research the thinking and work of other missionaries in country and from around the world
  - Ability to assess the cultural, religious, and political context in which one's ministry is taking place
  - Ability to formulate credible and workable strategies with others



The fifth and last predictor dimension assessed by this study has to do with the stability and development of *family life*. Both the categorical results of the instruments and comments made personally to the researcher indicate the importance of this dimension.

Indicators include:

- 1) Schooling:
  - Adaptation and satisfaction of spouse and children to the schooling situation
- 2) Marital relationships demonstrated by:
  - Communication with spouse/understanding between marital partners
  - Sense of closeness to spouse
  - Development of marital relationship
- 3) Family relationships demonstrated by:
  - Sense of family closeness
  - Development of relationships with children
  - Relaxed communication within the family.

### A Model of Cross-Cultural Ministry Competence

The model of competence which will be developed here is based on the criteria and predictors found to identify “most competent” missionaries. It must be kept in mind that this model of competence is a composite of attainable ideals,<sup>30</sup> and that the closer an individual comes to this composite the more competent he or she is likely to be. It must also be kept in mind that intercultural ministry competence is so complex that this model is not complete. It merely reflects the findings of this particular study.

The following definition is composed of four sections, each identified with a dot (“•”).

•A competent missionary has a biblically-sound and psychologically-healthy *self-perception and world-view*, *dynamic growing spirituality* expressed in dependence on God, a Spirit-controlled life and ministry, and concern and compassion for people, and *positive personality characteristics* which are oriented to continued learning, to effective action, and to sensitive interpersonal interaction. •He or she has *adaptive skills* (enabling behavioural flexibility to changes required by physical, interpersonal, and cultural demands as well as the requirements of tasks), *functional skills* (enabling effective use of material items in the culture, ability to learn, process, and use cultural data, facts, and information in conjunction with previously learned theological, missiological, ecclesiological, and factual data, and ability to relate to people in the culture in socially and individually meaningful ways), and *ministry skills* (both basic professional ministry competence and acculturated ministry skills). •Since all of this occurs within a *context*, the competent missionary has contextual sensitivity to and ability to effectively relate to 1) the structures, meanings, values, ethos, etc. of the culture, 2) national people and their individual real and felt needs and interests, 3) the church (local, regional, and national), as corporate bodies and with individuals, and 4) spiritual realities (both visible and invisible). •The missionary is determined to be competent and so maintains a positive and satisfactory marital life and family relationships, continues to *grow* and learn in all area of life and ministry, and has a sense of progress in ministry.

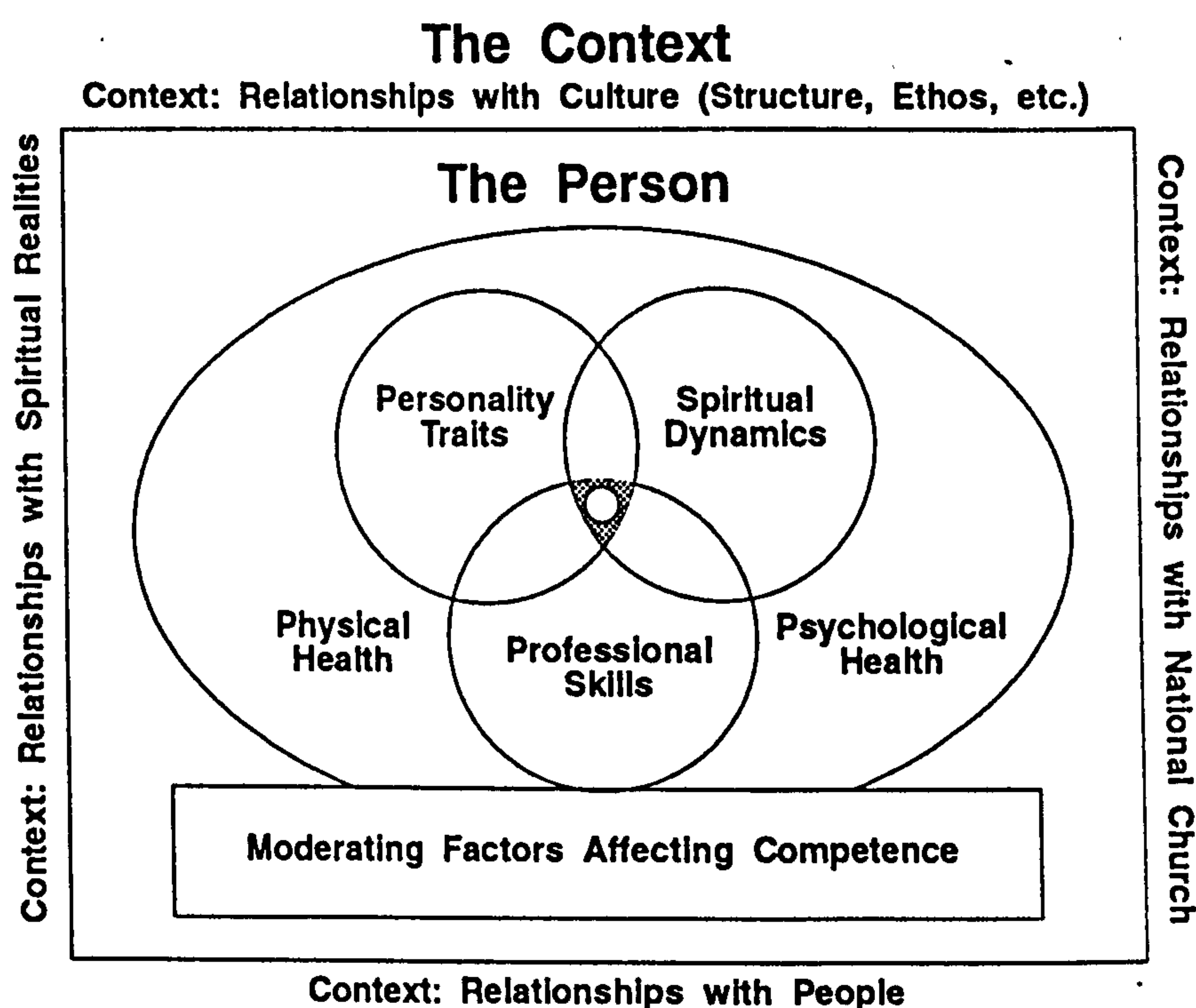
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<sup>30</sup>Not all missionaries were “most competent” in all areas, though all were “most competent” in some areas. That is why a composite of these expresses the ideal.

This definition is highly condensed. Every item could be further explicated with a list of indicators. Instead, the four sections of the model will be presented together as a composite model, then one at a time with indicators.

Figure 16 shows the main person-context interrelationships of the model. The context includes all interrelationships of all kinds external to the individual, from the micro- and macro-levels of culture, to relationships with people (nationals, missionaries, other expatriates, family members, authorities, etc.), to relationships with the national Church and para-church organizations, to how one relates to spiritual structures whether formal religious entities or invisible spiritual forces. The person's competence should logically be at it's highest where physical and psychological health is optimal,<sup>31</sup> and at the intersection of optimal personality traits, spiritual dynamics, and professional skills related to cross-cultural living, interaction, and ministry. Finally, within this model, competence is influenced by certain moderating factors, such as quality and satisfaction of one's family and marital life, continued personal and professional growth, and sense of ministry progress.

Figure 16: Competence Model Overview

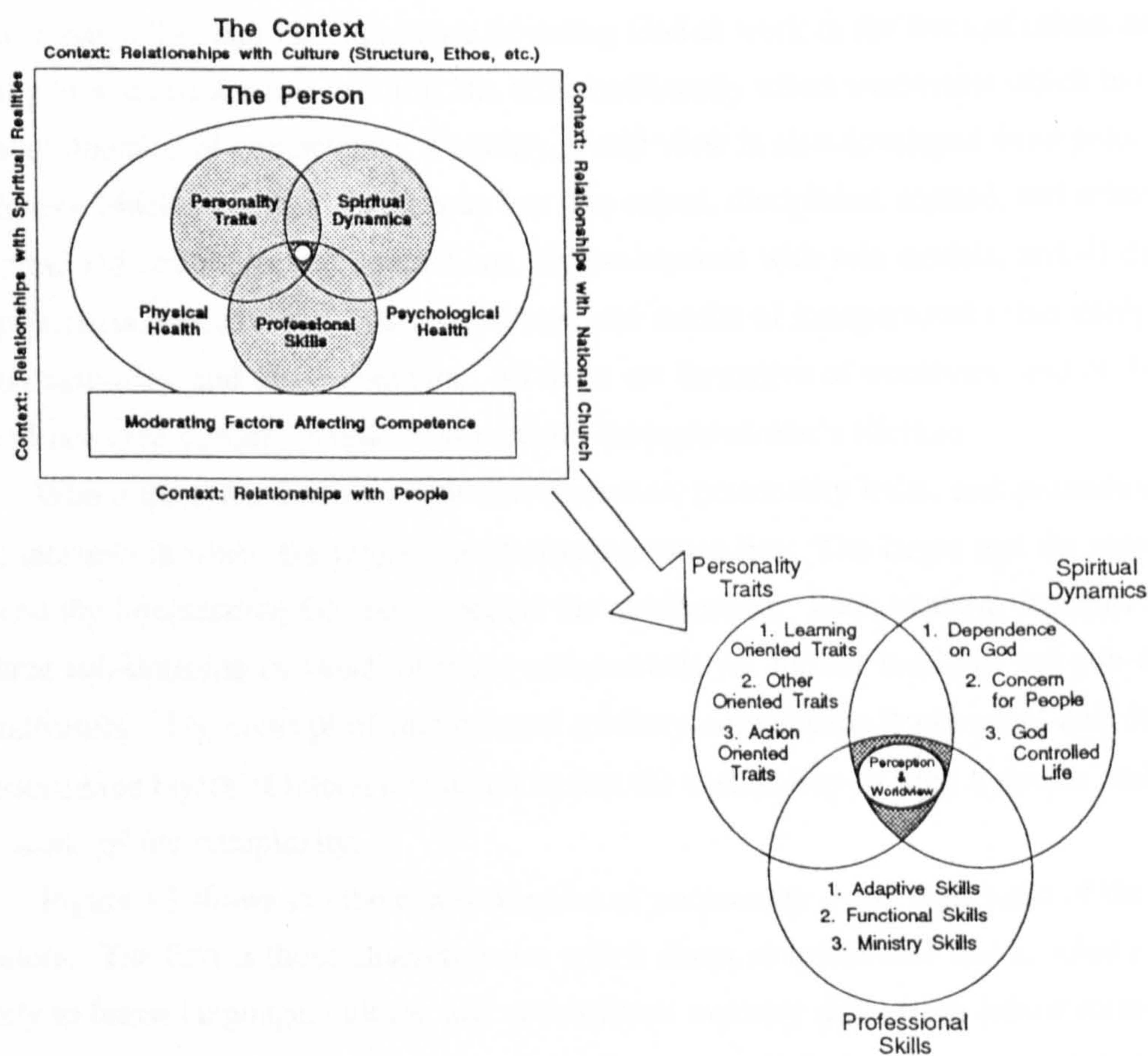


<sup>31</sup>It is imperative to realize that for the missionary this is not necessarily true. Sometimes there is greater competence in the sense of optimal results when an individual in *weakness* finds that God, for His own glory, works through that weakness rather than through strength. Paul, the apostle, found this to be true: "If I must boast, I will boast of the things that show my weakness. ...To keep me from becoming conceited...there was given me a thorn in my flesh. ...Three times I pleaded with the Lord to take it away from me. But he said to me, 'My grace is sufficient for you, for my power is made perfect in weakness.' Therefore I will boast all the more gladly about my weaknesses, so that Christ's power may rest upon me. That is why, for Christ's sake, I delight in weaknesses, in insults, in hardships, in persecutions, in difficulties. For when I am weak, then I am strong." (II Cor. 11:30; 12:7-10).



Figure 17 shows the interrelationships of personality traits, spiritual dynamics, and professional skills. Each domain (comprised of three further sub-domains and their indicators), interacts with and influences the others, and all are needed for optimal competence. The center, “perception and worldview,” influences the development and expression of all domains, and is therefore foundational to them. By “perception and worldview” is meant biblically-sound and psychologically-healthy *processes* by which an individual perceives the world around him, other people, logical/ideational structures, and cultural patterns and values.

Figure 17. The Individual: Interrelationships of Personality Traits, Spiritual Dynamics, and Professional Skills



There are at least four ways by which the worldview of the missionary is formed and influenced. The first is through *informal cultural learning* which is inculcated through early life experiences, through peer interaction, and by unconscious/subconscious acquisition of the values and beliefs of one’s culture. The second is through the development of one’s *interactive characteristics* by which an individual relates to the external world. These characteristics include people-perception attributes, categorization processes, attributive judgements, low-context/high-context orientation, self-monitoring skills, self-efficacy confidence, and social cognitive complexity.



A third aspect which develops worldview is one's *biblical perspectives/theology* on God, man, sin, holiness, and all such life-related issues. These perspectives as core beliefs are highly directive and determine influential values such as motives, sense of personal worth, the value of others, relationships, discipline, wholeness [based on forgiveness of sin, positive responses to experiences of abuse, the development of holiness, etc.], humility, power and desire for service, perspective on ministry context [conflict between the Kingdom of God and the kingdom of Satan], etc., etc.).<sup>32</sup> These biblical perspectives are not merely cognitive and intellectual. Experiences of the grace and power of God in one's life are highly influential. The transforming power of regeneration, fellowship and communion with God, obedience, being experientially led by the Spirit of God, the revelational power of the Word of God in one's life, and the experience of seeing God at work in the lives of others as well as seeing how it enables one to fulfill His will significantly effect worldview which in turn effects all domains of competence. Fourthly, world-view is also developed from *prior life experiences* which arise from 1) the way one was raised, disciplined, trained, and schooled, 2) cultural and environmental interactions, 3) involvement with role models, and 4) the appropriateness, effectiveness, satisfactoriness, and results of interpersonal relationships, ministry activities, and life encounters. All these are formative of worldview and of the way one will perceive culture, people, and ministry throughout one's lifetime.

Where the three domains (spiritual dynamics, personality traits, and professional skills) intersect is where the highest level of competence lies. The larger and the more balanced the intersection, the more optimal the competence. Each of these domains in turn has three sub-domains and each of those sub-domains yet further levels of sub-sub-domains and indicators. The concept of intercultural ministry competence is complex, and depicting it as successive layers of interactive domains was the easiest way to keep it simple and yet show some of the complexity.

Figure 18 shows the three sub-domains of *personality traits* with some of the indicators. The first is those characteristics which direct or orient *how* and *to what extent* one is likely to learn language, culture, and acculturated ministry skills from fellow missionaries, from national mentors, from cultural and social events, and from mission-sponsored opportunities. The higher these characteristics, the more one is likely to learn and continue to learn for a lifetime. A second sub-domain includes characteristics which determine *how*, *to what extent*, and *how effectively* one is likely to relate to people. Other-oriented characteristics determine social and interpersonal skills, and as a consequence, effectiveness

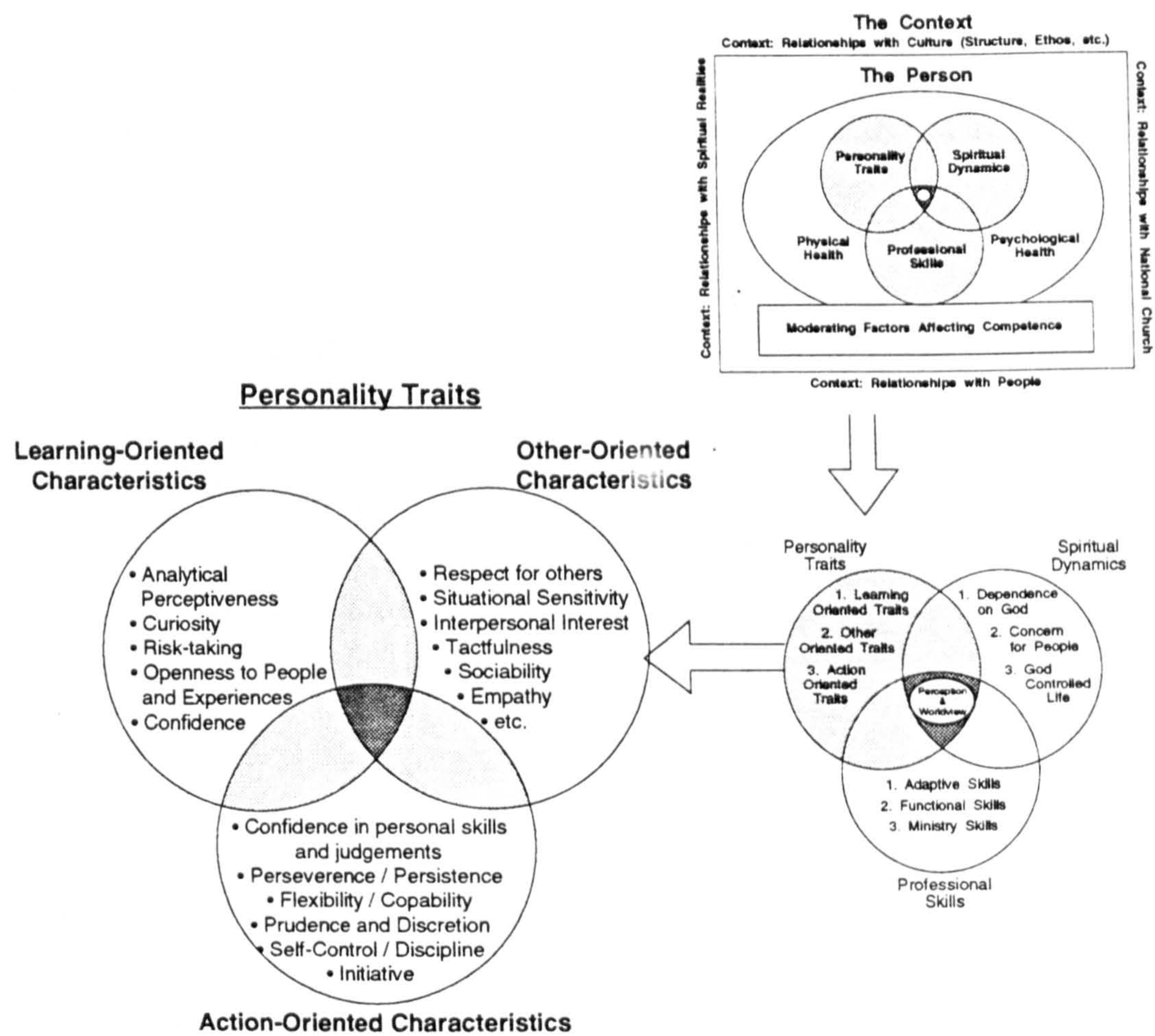
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<sup>32</sup>The centre (perception and world-view) has been printed in italics because it must be verified through further empirical research. Variables and their derived factors do not specifically measure self-perception except in an oblique way. Study of the means (and skew) in sections related to Personal Growth, real and ideal Spiritual Dimensions, Adjustment, Personal Expectations, Personal Satisfaction, Personal Dimensions, and Social Dimensions suggests that biblically-sound and psychologically-healthy perceptual skills and world-view is foundational to all spiritual dynamics and personality traits. Psychology, competence theory, and theology also suggest this.



in relating to people. These characteristics of empathy, sociability, tactfulness balanced with frankness, respect for others, etc. are essential for competent ministry. The third, action-oriented characteristics, are traits which determine *how, to what extent, and how effectively* one is likely to be able to carry out ministry within the freedoms and constraints of the cross-cultural context. Those who have initiative, persevere, are flexible, cope, are prudent in the proper contexts, and are confident in others will be more likely to succeed than those who are not.

Figure 18: The Individual: Sub-domains of Personality Characteristics



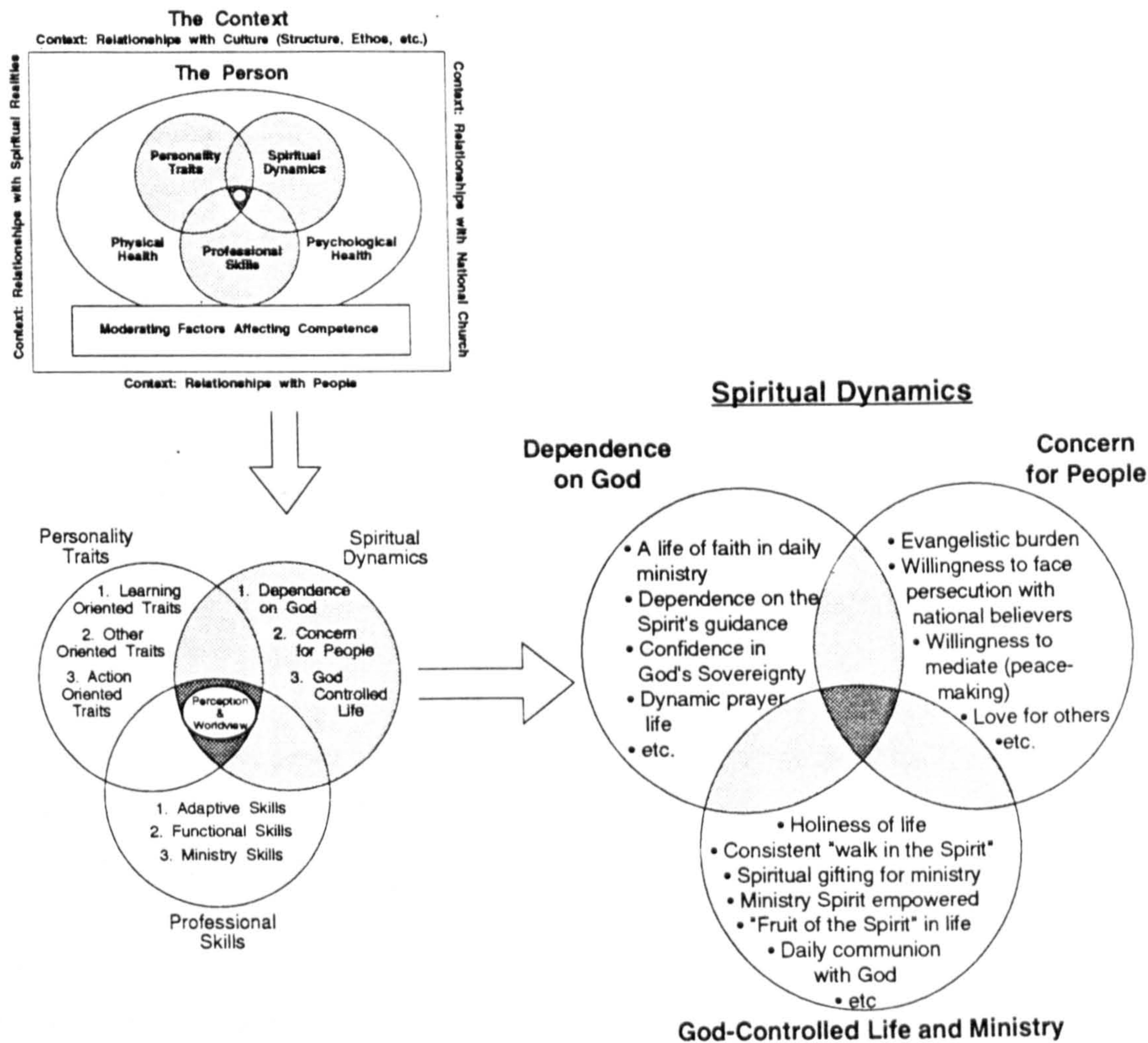
Research findings of this study<sup>33</sup> indicate that all of these characteristics are important for cross-cultural ministry competence but are not the deciding factors in competence. This appears to verify interactionalism’s assertion that competence is predicated on more than traits, and that other factors (including context) must be considered. One of these factors, *spiritual dynamics*, appears to be even more significant to missionary competence. That is, there was greater distinction in spiritual dynamics between the “most

<sup>33</sup>There was not always a lot of difference between “most competent” and “least competent” groups in these characteristics.



competent” group and “least competent” group than was the case with personality characteristics.

Figure 19: The Individual: Sub-domains of Spiritual Dynamics



This should not be surprising for two reasons. First, the importance of “traits” is directly linked to their adaptive facility within the cultural and situational context.<sup>34</sup> Secondly, unlike secular enterprises (such as those undertaken by volunteer organizations like CIDA, VSO, and the Peace Corps, business efforts, and military activity) Christian missions has the spiritual at its heart. Regardless of what activities may be used to communicate the Gospel across linguistic and cultural barriers (education, literacy, medicine, agriculture, famine relief, community development), the focus of mission in its classical biblical sense is:

...carrying the gospel across cultural boundaries to those who owe no allegiance to Jesus Christ, and encouraging them to accept Him as Lord and Savior and to become

<sup>34</sup>See Chapter Two for the discussion on this.



responsible members of His church, working, as the Holy Spirit leads, at both evangelism and justice, at making God's will done on earth as it is in heaven.<sup>35</sup>

As such, it is impossible to carry out such a task without personal regeneration (Mt. 19:28; Titus 3:5; Jn. 3:3,7; I Pet. 1:3,23) which results among other things in new life/personal transformation (Rom. 6:3-4; Col. 3:1-4; II Cor. 5:17) and the presence of the Holy Spirit (Rom. 8:15-16; II Cor. 1:21-22; Eph. 1:13-14) Who empowers for ministry (Acts 1:8). There must be fellowship with and obedience to a sovereign, almighty, wise, and good God (Is. 40:12-31; Rom. 11:33-36; Ps. 145:17) Who is recognized as Judge of all (Rev. 15:3-4; 16:5-7; Rom. 9:18-23) and Redeemer (Lk. 19:10; I. Tim. 1:15; I Jn. 4:14). There is a sense of commission and urgency to the task (Mt. 28:18-20; I Cor. 9:16-17). Therefore, unlike secular studies of competence which do not need to take spiritual dynamics into consideration, these are critical for missionaries. The more vital the spiritual life (especially in terms of "walking in the Spirit," "being led of the Spirit," utilizing the "gifts" of the Spirit, and showing in one's life the "fruit of the Spirit"), the more competent the missionary. The findings clearly indicate this.

All "ideal" spiritual variables showed consensus among evangelical missionaries from the six different organizations (representing a wide variety of backgrounds). The means were between 4 and 5 (on five-point Likert scales) indicating very high value orientations. The "real" spiritual variables, which tested out the extent to which the "ideal" were being lived out in everyday life, came closer to average means, and in factors which were developed from these, showed a fair continuum, with top and bottom groups significantly distinct through T-tests. These "real" spiritual values have been placed into three categories: dependence on God, concern/compassion for people, and Spirit-controlled life and ministry. The three personality orientations (learning-orientation, people-orientation, and action-orientation) interact with all three spiritual dynamics categories. Dependence on God especially relates to learning-orientation, concern and compassion for people fits "other-oriented" characteristics, and a Spirit-controlled life can be identified with action-oriented characteristics.

The domain of Professional Skills is composed of three sub-domains: adaptive skills, functional skills, and ministry skills.<sup>36</sup> *Adaptive skills* are "all those competencies that enable

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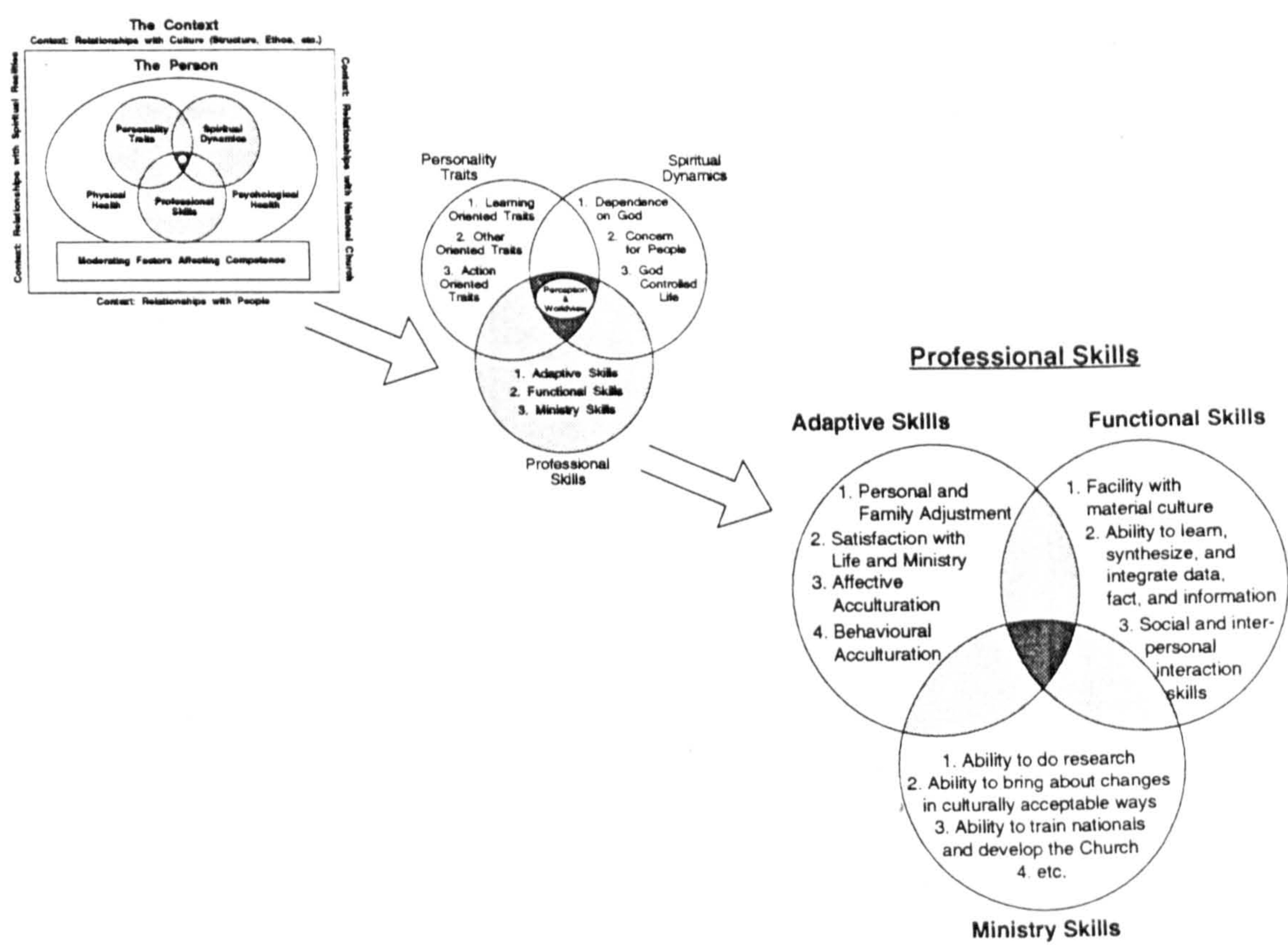
<sup>35</sup>This definition of mission is carried throughout this study because the study focuses on evangelical missionaries for whom anything less than this would be considered unbiblical. In fact, their definition of mission would "reject any activity, even that of verbal proclamation of the name of Jesus, which does not unshakeably intend that the unredeemed should choose to become disciples of Christ, bound together in congregations, indwelt by the Holy Spirit, and resolved to live the corporate life as Christ would have them live it." This quote and that above from Arthur F. Glasser and Donald A. McGavran, Contemporary Theologies of Mission, (Grand Rapids, Michigan: Baker Book House, 1983), pp. 26-27.

<sup>36</sup>The categorisation of this "Professional Skills" domain into three sub-domains is based on the CAEL communication competence model which refers to the third sub-domain (ministry skills) as



individuals to adapt their behaviour to the demands for conformity and/or change made by the physical, interpersonal, and organizational conditions and requirements of a particular task.”<sup>37</sup> Skills for adaptation are likely more essential for cross-cultural work than they are for living and working in one’s native culture. These skills include the capacity to adjust and to acculturate both affectively and behaviourally. *Functional skills* are “all those competencies that enable individuals to relate to Things (Psychomotor), Data (Informational), and People (Interpersonal) in some combination according to their personal preferences, and with some degree of complexity appropriate to their abilities.”<sup>38</sup> *Ministry skills* are those competencies that enable a person to undertake ministry tasks successfully.<sup>39</sup>

Figure 20: The Individual--Sub-domains of Professional Skills



Adaptive skills enable both intercultural adaptation and acculturation. Adaptation is essential for initial culture entry (culture shock), on-going acculturative stress, and the

“Specific Content Skills.” See Paul Breen, Thomas F. Donlon and Urban Whitaker, *Teaching and Assessing Interpersonal Competence: A CAEL Handbook*, (Columbia, MD.: CAEL, 1977), pp.23-25.

<sup>37</sup>Ibid., p. 23.

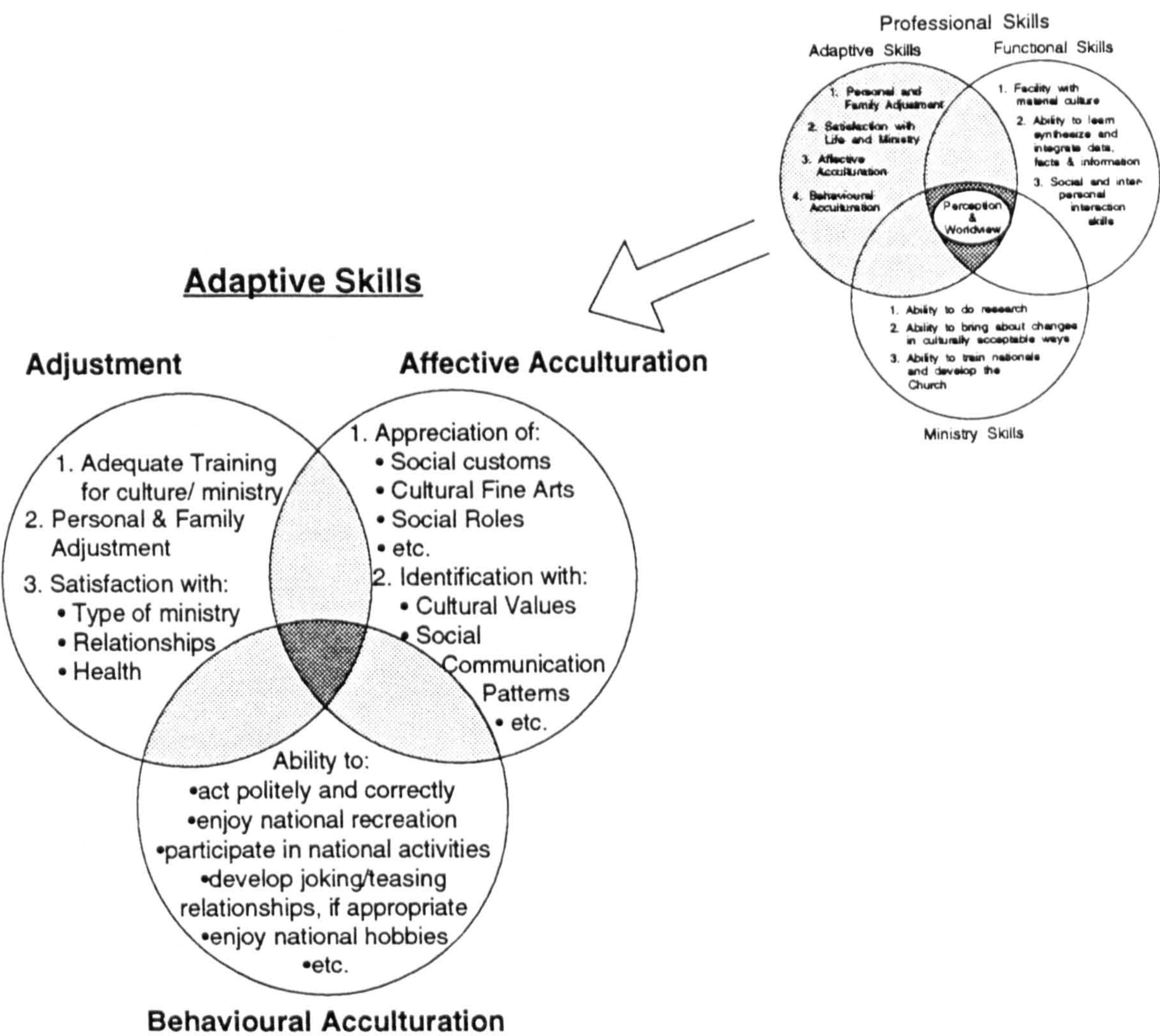
<sup>38</sup>Ibid., p. 25.

<sup>39</sup>The CAEL definition of “specific content skills” does not define ministry skills as such.



flexibility (copability) needed in day-to-day ministry stress. It is expressed through the demonstration of adequate training, personal and family “settledness,” and a sense of satisfaction with language proficiency and development, cultural involvement, friendships, health, marital and familial relationships, etc.

Figure 21: The Individual/Professional Skills--Adaptive Skills



Because affective and behavioural acculturation result in changes and adaptation to the culture, they require and signify adaptive skills. These skills include:

- 1) Appreciation of the Culture in its:
  - Social Roles
    - male and female roles and status
    - authority and individualism/collectivism
  - Cultural Fine Arts
    - language, literature, art
    - traditions and ceremonies
    - music
  - Social Customs
    - social manners
    - dress
    - values of honour and self-respect



- customs related to child-rearing
  - customs arising from traditions
- 2) Adaptation to the values and social patterns of inter-relationships such as:
- Values of the culture arising from traditions
  - Values of the culture related to honour and self-respect
  - Values related to male and female roles and status
  - Patterns related to authority, decision-making, and individualism
  - Acceptable social fit (patterns of living like the people)
  - Social patterns of inter-personal relationship
  - Patterns by which people handle conflict
  - Use of acceptable and effective media methods
  - Oral communication patterns
- 3) Behavioural adaptation such that one is able to:
- Enjoy acting politely and “correctly” in social interaction
  - Enjoy expressing cultural customs in my behaviour
  - Enjoy joking and teasing relationships with nationals
  - Enjoy balancing “work” and “play” the way nationals do
  - Enjoy going to various recreational places (parks, stadia, concerts, etc.)
  - Enjoy participating in traditional ceremonies with national friends
  - Enjoy learning from mentors in the culture
  - Enjoy playing instrument, painting, making pottery, etc.

Functional skills refer to the ability to *function* both efficiently and effectively. The functional skills which are specific to intercultural ministry relate to three areas. The first is the capacity to be at ease with *material culture*. This is the ability to live as much like nationals as possible: being flexible enough to make use of their building materials, to eat their food, to live in their type of housing, to use their transportation, to wear their clothes, etc. All of these, of course, are dependent on how they affect health, the balancing of efficiency with effectiveness,<sup>40</sup> the missionary’s role within a community, and organizational strictures or requirements.

The second area of functional competence is *informational*. Cross-cultural ministry requires functional knowledge and abilities on two levels: basic ministry content (such as theology, ecclesiology, missiology, sociology, anthropology, economics, etc. which are acquired in most cases primarily through academics) and cultural knowledge (cognitive acculturation acquired mostly through cultural interaction and the teaching of national mentors). Cultural knowledge includes such areas as:

- 1) Knowledge about the structures of a country and culture:
- Macro- and micro-political and authority structures
  - Macro- and micro-economic structures
  - History of the people and culture
  - Belief structures:
    - Oral and written traditions of a culture
    - Religion and cosmology
  - Social Structures:
    - Kin-relationships
    - Child-rearing/socialization processes

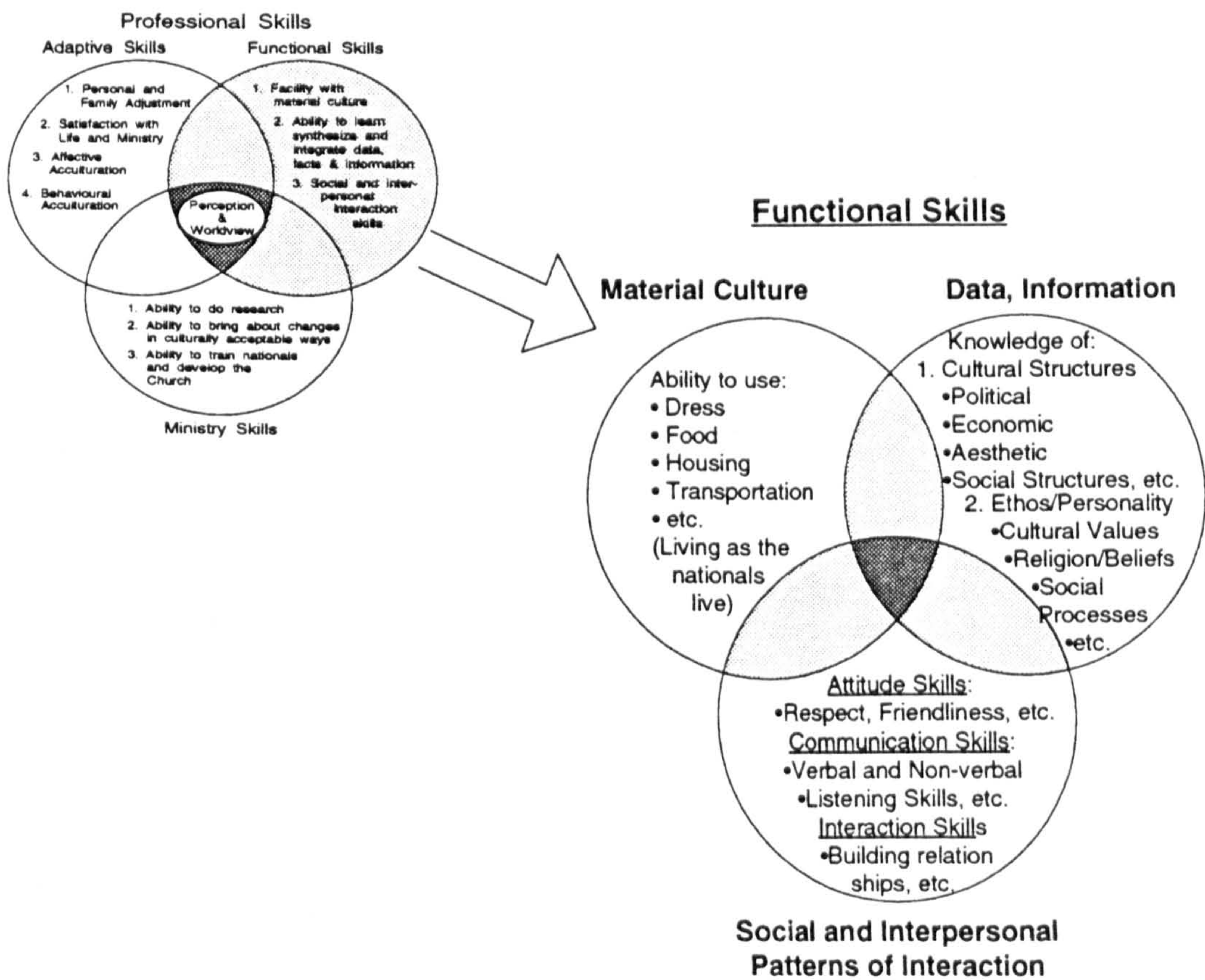
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<sup>40</sup>It may be more efficient not to use local material culture, but may not be more effective because it may result in one being distanced from the very people one is intending to relate to. However, there are issues of modesty, health, family satisfaction, etc. which need to be balanced with identification as much as possible in living with the people.



- Societal communication channels
  - Life-cycle rituals
  - Material Culture
  - Aesthetic Culture: art, music, literature, etc.
- 2) Knowledge of the ethos and personality of the culture:
- Influence of Cultural Values
    - the impact the traditions of the culture have made on its ethos
    - basic assumptions and values generated by religious beliefs
    - the world-view of the people
    - the cultural character of the people (motives, traits, beliefs, etc.)
    - how cultural values are seen in the material culture
  - Influence of Religious Beliefs
    - how art, lit., and music express needs and longings of the people
    - how rituals fit patterns of beliefs
    - how oral and written traditions fit to form cultural “truths”
    - how patterns of religious thought impact life of the people
  - Influence of Social Processess
    - communication and relationships in kinship patterns
    - why people act as they do as a result of socialization processes
    - how kin. patterns present ways for diffusion of innovation & change
    - which people constitute the fringe & which the core of society
  - Influence of Economic and Political Structures
    - relationships of local and national economic structures
    - how decisions are made, communicated, and exercised
    - how the history of the people has influenced their culture
    - communication flow within, out of, and into the culture
    - accepted and effective communication channels and media
    - accepted patterns for relating to authority structures

Figure 22: The Individual/Professional Skills--Functional Skills





The third functional area is social and interpersonal interaction, the capacity to relate to people competently. Attitudes, communication (verbal and nonverbal) skills, and interaction skills comprise the three levels within this area. Indicators of social interaction include:

- 1) The extent and number of times that missionaries visit nationals in their homes, enjoy activities with nationals, and have national friends
- 2) The extent to which missionaries get involved in social and cultural activities
- 3) The extent to which missionaries seek advice from nationals
- 4) Skills in conflict resolution
- 5) The extent to which missionaries have joking and teasing relationships with nationals
- 6) How well missionaries relate to nationals *vis a vis* worldview, values, and beliefs
- 7) How well missionaries work with national church leaders.

The third sub-domain under professional skills is acculturated (contextualized) ministry competencies. Again there are at least three dimensions: research and planning skills, change-agent skills, and skills for training nationals and developing the church. While there are basic professional ministry competencies such as 1) the ability to adequately exegete the Scripture and expound it clearly and effectively to people's thought patterns and in appropriate ways, 2) to counsel and relate compassionately to people's felt needs in concrete ways, 3) to teach and disciple people for spiritual growth, training them to minister to others, 4) to administrate, 5) to develop vision and help others "catch it," and 6) to worship God and develop a community of worshippers, these types of competencies are necessary for ministry anywhere. However, within the cross-cultural framework, they must be contextualized to fit socio-cultural realities and the unique needs of the church within that context. In most cases, godly national men and women who know both Scriptures and their culture and who are walking in humble sensitivity to the Spirit of God are able to help in contextualizing ministry. Some of the skills for acculturating ministry include:

- 1) Ability to do research and do strategic planning with others:
  - Ability to research and assess the cultural, religious, and political context in which one's ministry is taking place.
  - To discriminate homogeneous groups of people in the culture for planning specific evangelistic efforts and development of acceptable and effective church structures and ministries
  - To understand the content and value of cultural definitions of moral standards in order to be able to speak and teach from a position of knowledge. Without this, one will not be able to apply the Scriptures contextually, (accepting what is biblically acceptable and rejecting what is not *biblically* acceptable<sup>41</sup>).
  - Ability to study, consult, self-evaluate to make sure one's own ministry fits the context
  - Knowledge of forms of Church structure which are both biblical and attractive to nationals

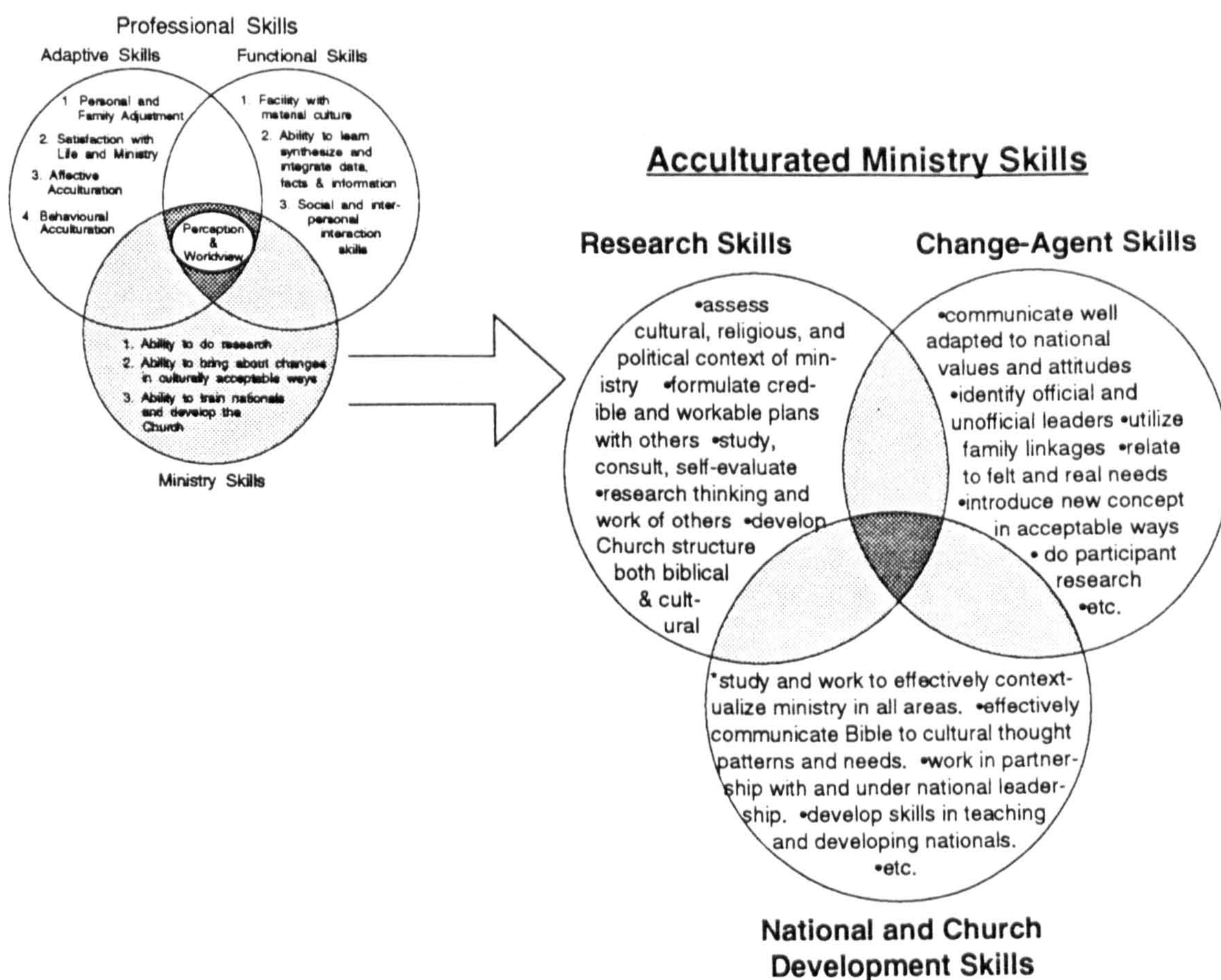
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<sup>41</sup>It is important that Christian nationals who are godly and sensitive to the Spirit of God help in discerning what is *not* biblical in the culture before rejection occurs. Otherwise, the danger is that one's interpretation may be coloured by one's own background and cultural values rather than by a biblical framework.



- Ability to describe changes in cultural values and why these changes are taking place
- 2) Ability to bring about change in culturally acceptable ways:
- To introduce new concepts into the community through appropriate channels
  - To adapt an argument to national attitudes and values
  - To identify unofficial local leaders, since these are the primary opinion and trend setters
  - To utilize family linkages for ministry contacts
  - To relate to individual and cultural felt needs for ministry
  - To use non-verbal communication effectively
- 3) Ability to train and develop nationals for culturally viable church growth:
- Ability to develop national leaders able to apply Bible to culture
  - Ability to see the church developed so one can move on to new ministry
  - Ability to use cultural metaphors for church development
  - Ability to effectively communicate Biblical truth to the thought patterns of the culture
  - Ability to work well in partnership with and/or work well under national leadership
  - To be concerned that nationals integrate Biblical truth to their own system of functioning
  - To show evidence that nationals are adapting one's work to their own systems

**Figure 23: The Individual/Professional Skills--Acculturated Ministry Skills**



Inevitably there will be factors which are not purely within the individual or in the context but which will have a moderating effect on the missionary's competence. One of these is the stability and happiness of his/her spouse and family, the extent to which the

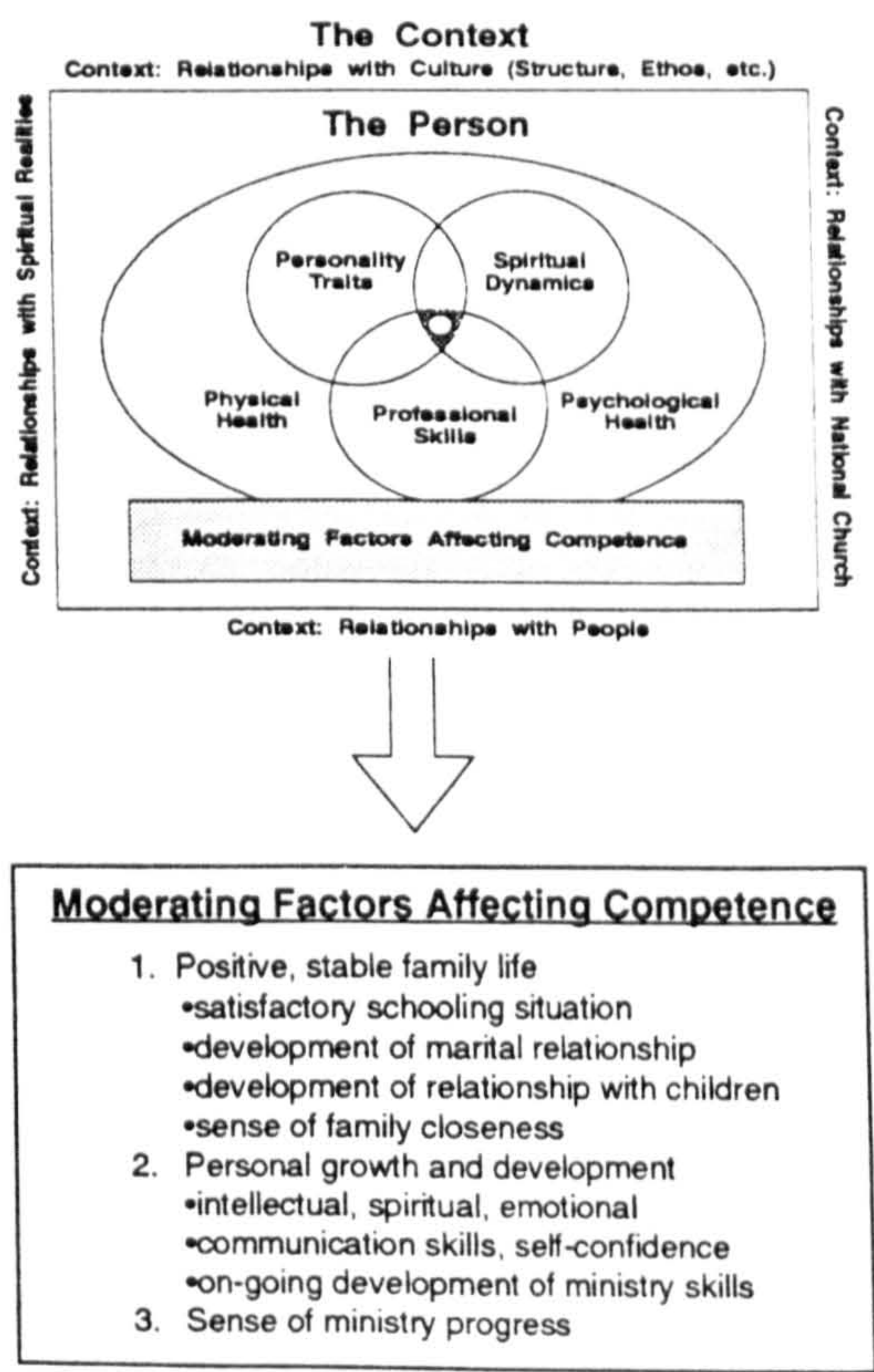


children’s schooling is satisfactory to children and parents, and the closeness of the relationships of parents with each other and with their children. A highly competent missionary whose family-life is in shambles will soon find his ministry negatively affected.

One of the interesting findings of the study is that age *vis a vis* competence tend to roughly fit a bell-curve. Both the youngest and the oldest missionaries tended to be disproportionately represented in the “least competent” category of most factors. Obviously the youngest, most of whom were in their first term, were learning language and culture and becoming acculturated. On the other end, the eldest (over 60 years of age) appeared to suffer some declension. This may indicate that where stagnation in growing personally and professionally sets in, competence will be affected. Declension in even one area, such as emotional stability and growth, spiritual development, or intellectual learning will influence an individual’s competence. The same may be true in failing to continue to grow in confidence, in interpersonal skills, in ministry knowledge and skills, and in the ability to move out in faith into new areas.

Finally, where there is little sense of progress in language proficiency, in being able to relate to people, and/or in seeing ministry growth, competence is negatively affected. Discouragement, sense of failure, low self-esteem, hopelessness, questioning one’s relationship with God, and depression may result where there is no sense of progress. These in turn affect physical, psychological, and spiritual health. There could well be other moderating factors but these three were the factors that arose as significant within this study.

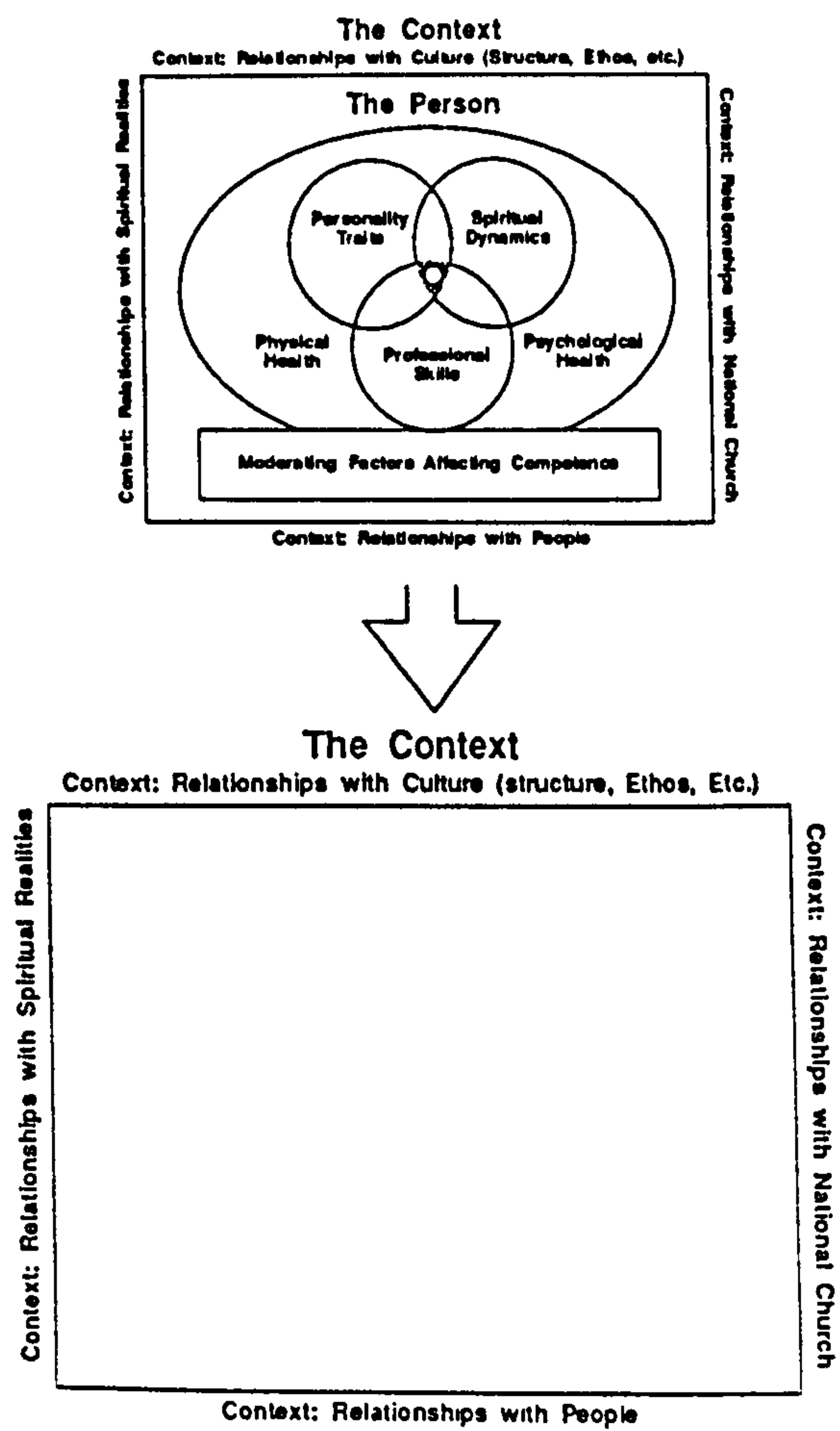
Figure 24: Moderating Factors Affecting Competence





All ministry interactions occur within a context (designated by the external box in the figure). These contextual constraints include 1) broad cultural values, expectations, norms, and ethos, some of which are overtly seen and others covertly experienced, affecting (even if at only a subconscious level) relational and ministry interactions and activities, 2) constraints in the symbolic and physical environments, 3) role expectations imposed on the missionary by the community (or vice versa), 4) relationships with people (level of friendship and types of relationship--cooperation *vrs.* competition, formal/impersonal *vs* informal/personal, intense *vs* superficial, etc.), 5) roles assigned by mission/national church and the effects resulting from this (attitudes of mission to church and church to mission, missionary to church, missionary to church leadership) as well as expectations arising from these roles and attitudes, and 6) relationships with local and regional religious leaders and bodies as well as recognition of and response to spiritual “principalities and powers...in the heavenlies.” The importance of the impact of all these situational factors on missionary competence should not be underestimated. For example, the missionary who does not understand biblical teaching and local realities of the opposition of Satan to the work of God may be ineffectual in the face of opposition in his ministry and therefore incompetent in the final analysis, no matter how much his knowledge, gifts, and skills!!

Figure 25: The Context



**Summary of the Cross-cultural Ministry Model: Nine Theorems**

It is possible on the basis of the findings of this study which produced the elements of this model to suggest the following theorems of cross-cultural ministry competence.

**Theorem 1:** Perception-process characteristics and life experiences develop worldview, worldview reinfluencing perceptual processes and interpretation of life experiences. The interdependent effects of these three foundational dimensions influence the development and outcomes of all components of cross-cultural ministry competence.

**Theorem 2:** Cross-cultural ministry competence is complex, multi-dimensional, and interactive. Macro-dimensions include the individual and the contextual. Each of these has various levels of micro-dimensions, all of which are interactive, dependently and interdependently influencing each other as well as relational and activity outcomes.

**Theorem 3:** Personal components include specific personality characteristics essential for cross-cultural effectiveness, spiritual dynamics necessary for ministry, and professional skills specific to the tasks. The stronger and more interactive these dimensions are, the greater competence is likely to be.

**Theorem 4:** Essential personality traits include those which direct the individual to life-long learning, to relating effectually with others, and to getting the task (contextual development of the Church) well done. Weaknesses in any of these three will reduce cross-cultural ministry competence.

**Theorem 5:** Spiritual dynamics are of greater importance than any other single dimension for cross-cultural ministry competence. This is because measurement of competence is based both on skills and on results.<sup>42</sup> First, since only that which is a work of God has both temporal and eternal significance,<sup>43</sup> only that which is done by the Spirit of God through a godly person finally results in *competent* ministry. Secondly, because the

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<sup>42</sup>Other authors have argued for this view of competence. See John M. Wiemann, "Explication and Test of a Model of Communicative Competence," in Interpersonal Communication: A Relational Perspective, Ben W. Morse and Lynn A. Phelps (ed.) (Minneapolis, MN: Burgess Publishing Company, 1980), pp. 100 - 116. Richard M. McFall, "A Review and Reformulation of the Concept of Social Skills," Behavioral Assessment 4 (1982): 1 - 33. Brian H. Spitzberg and William R. Cupach, Interpersonal Communication Competence, (Beverly Hills, CA: Sage Publications, 1984), p. 116. Michael E. Roloff and Kathy Kellermann, "Judgments of Interpersonal Competence: How You Know, What You Know, and Who You Know," in Competence in Communication: A Multi-Disciplinary Approach, Robert N. Bostrom (ed.) (Beverly Hills, CA: Sage Publishing, 1984), pp. 179-182.

<sup>43</sup>1 Cor. 3:7-15 "So neither he who plants nor he who waters is anything, but only God, *who makes things grow*. ...For no one can lay any foundation other than the one already laid, which is Jesus Christ. If any man builds on this foundation using gold, silver, wood, hay, or straw, his work will be shown for what it is, because the Day will bring it to light. It will be revealed by fire, and the fire will test the quality of each man's work. If what he has built survives, he will receive his reward. If it is burned up, he will suffer loss..."



Spirit of God can and does work in spite of weaknesses in a person, ministry which is effectual can and does result through those who are led and empowered of God.<sup>44</sup>

**Theorem 6:** Cross-cultural ministry competence requires adequate adaptive (acculturative) skills, functional skills (especially adequate prior professional training with on-field language and culture-learning), and contextualized ministry skills. All other factors taken into account, the greater the integration of all dimension of these skills, the greater cross-cultural ministry competence will be.

**Theorem 7:** Personal moderating factors which will affect competence include physical and psychological health, continued personal growth in all areas of life, and personal satisfaction with the development and progress of one's ministry.

**Theorem 8:** The level of one's skills (predicated on competencies in all personal dimensions) in relating to all contextual components will influence the level of cross-cultural ministry competence. These contextual components are multi-dimensional: *familial* (spouse and children), *individual* (nationals and ex-patriats--missionary and non-missionary, male and female, Christian and non-Christian, etc.), *official/role* (government officials, professionals, trades, etc.), *organizational* (Church and non-Church organizations), *cultural* (structures, ethos, activities, values, expectations, and morés, etc.), and *spiritual* (visible structures of religion and invisible structures of spiritual "principalities and powers").

**Theorem 9:** Cross-cultural ministry competence is associated less with formal pre-field educational levels<sup>45</sup> than it is with motivation to learn on-field from national and missionary mentors. While formal education is important, it does not appear to be as critical to competence as other factors, such as capacity to acculturate, to socialize with and enjoy people, and to have a compassion and practically applied concern for others.

### Implications of the Study for Education and Training

Findings of this study concur with the concerns expressed in chapter one by educators and mission leaders of the general weakness of theological and missiological education to adequately prepare people for competent field-based ministry.<sup>46</sup> A brief listing of these

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<sup>44</sup>This is not an excuse for incompetence nor does it negate the importance of all other dimensions. Selection processes must take all of them into account to avoid the grief and loss associated with unnecessary attrition. On the other hand, the importance of and need for the power of God in an individual's life must never be underemphasized.

<sup>45</sup>Extreme-end profile analysis showed that there was little difference in formal education between the "most competent" and "least competent" groups and that only 30% of those who had undertaken graduate and post-graduate studies found them to be exactly what was needed.

<sup>46</sup>See pp. 5-8. Some of these concerned educators and mission leaders include Peter Savage, "Four Crises in Third World Theological Education," *Evangelical Missions Quarterly* 9 (1972): 28-29. Edgar J. Elliston, "Designing Leadership Education," *Missiology: An International Review* 16 (1988): 204. Donald A. McGavran, *Effective Evangelism: A Theological Mandate*, (Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1988), p. 3. Ron Fisher, "Why Don't We Have

findings will orient toward some suggestions for dealing with the problem. First, extreme-end profile analysis showed education to have seemingly little clear impact on ministry competence. Every factor (except one) was evenly balanced between most competent and least competent groupings in terms of educational levels. The “most competent” category had individuals with no more formal education than high school through each level to doctoral studies. And with each factor, inevitably there were the same numbers of each educational level in the “least competent” category. For example, if a doctoral-level individual appeared in the “most competent” category, a doctoral-level individual was likely to appear in the “least competent” category as well.<sup>47</sup> These results were the same on factors developed from national returns, missionary-colleague returns, and self-evaluations.

Secondly, results from missionary *valuations* of formal academic content had some interesting but logical results. The more immediately applicable (and pragmatic) the subject to the ministry, the more highly valued. A perusal of Appendix 10 tabulates the percentage of subjects who identified as “high” the value of training *received at any time* (formal academics and formal or nonformal pre-field, on-field, and/or furlough education offered by missions or mission-associated schools and agencies). The most highly valued training was in cross-cultural communication, spiritual warfare, personal maintenance skills, and church planting.

Table 160: Educational Content Highly Valued and Currently Needed<sup>48</sup>

High Educational Value	%	High Current Need	%
Church Growth	49%	Church Growth	52%
Church Planting	56%	Church Planting	58%
Cross-Cultural Communication	68%	Cross-Cultural Communication	55%
Cross-Cultural Evangelism	51%	Cross-Cultural Evangelism	52%
Spiritual Warfare	60%	Spiritual Warfare	55%
Christian Education	53%	Field Language Learning	51%
Personal Maintenance Skills	58%	Personal Spiritual Dynamics	58%
Pastoral Ministry	50%	National Church Leadership Development	50%
Spiritual Gift Development	52%	Role of the Holy Spirit	60%
Culture and Change Dynamics	48%	Discipling New Believers	55%

More Church-Planting Missionaries?," Evangelical Missions Quarterly 14 (1978): 205-211. George Murray, General Director of the Bible Christian Union and head of the Europe Committee of the Evangelical Fellowship of Mission Agencies (EFMA) quoted by Jim Taylor, "Where are the Evangelists? Mission Agencies Want To Know," The Gospel Message 3 (1989): 3. Edwin L. Frizen, Jr., "Executives Tell Mission Profs What They Think," Evangelical Mission Quarterly 8 (1972): 145.

<sup>47</sup>Obviously, an individual teaching in a theological school would have to have higher education. The study design did not research formal educational teaching criteria. The focus was on broader skills, especially those related to evangelism and church-development.

<sup>48</sup>Anything 50% or higher was included. The value identified here is the percentage which referred either to “much” value or “high” need (ie. the highest of the four-point Likert scale).



Items stipulated by subjects as most *highly needed* parallel and verify the criteria of competence which have been identified by this study. Even as *spiritual dynamics* are the single most important distinction between “most competent” and “least competent” missionaries, the highest need was identified by 60% to be understanding and experiencing the “role of the Holy Spirit,” closely followed by “spiritual dynamics.” Then come “church planting,” “spiritual warfare,” “church-planting,” “discipling new believers,” and “cross-cultural communication.” Most of these subjects are related.

Table 161: Educational Content Low in Value and Current Need<sup>49</sup>

Low Educational Value	%	Low Current Need	%
Demographic Study Skills	15%	Demographic Study Skills	9%
Ecumenics	11%	Ecumenics	6%
Issues of Justice and Ministry	11%	Issues of Justice and Ministry	11%
Missiological Trends	15%	Missiological Trends	10%
Philosophy	14%	Philosophy	13%
Political Science	8%	Political Science	4%
Psychology	12%	Psychology	12%
Sociological Study Skills	15%	Sociological Study Skills	12%
Sociology and Ministry	11%	Sociology and Ministry	12%
Personal Spiritual Dynamics	4%	Ethnographic Skills	20%
Evangelistic Bible Studies	3%	Anthropology	11%
Family Life	0%	Accounting	19%
Field Language Learning	0%	Administration	17%
Role of the Holy Spirit	0%	Linguistic Analysis	20%
Systematic/Biblical Theology	0%	National Church and Suffering	10%
Discipling New Believers	0%	Radical Theologies	10%

Table 161 tabulates educational content that had very low percentage of subjects identifying “high” value in their training. Interestingly, many of the subjects that few identified as “high” in value are the very ones which tend to be of special focus in theological academic institutions, such as systematic and biblical theology, discipling new believers, the role of the Holy Spirit, philosophy, psychology, sociology, missiological trends, ecumenics, etc. What is significant, however, is that many of these subjects were also considered to be of *high current need*. For example, systematic and theological education, though rated 0% as “high”<sup>50</sup> value was 39% in high need; discipling new believers, though rated 0% in “high” value was 55% in high need; teaching on the role of the Holy Spirit in life and ministry, though rated 0% in “high” value was 60% in high need; and personal spiritual dynamics,

<sup>49</sup>Anything 20% or less was included. The value identified here is the percentage which referred either to “much” value or “high” need.

<sup>50</sup>Keep in mind that while many of these were low in the “high value” category, all were identified by a majority as being “moderately valuable.”

though only 4% in “high” value was 58% in high need. Even language schools came in for a beating here. Field language learning, though rated 0% in “high” value, was 51% in high need.<sup>51</sup>

Table 162: Educational Content Low in Value but High in Current Need<sup>52</sup>

Prior Educational Value	%	Current Learning Need	%
Role of the Holy Spirit	0%	Role of the Holy Spirit	60%
Personal Spiritual Dynamics	4%	Personal Spiritual Dynamics	58%
Discipling New Believers	0%	Discipling New Believers	55%
Field Language Learning	0%	Field Language Learning	51%
Systematic/Biblical Theology	0%	Systematic/Biblical Theology	39%

Thirdly, missionaries showed a tendency to move away from formal learning and/or informal academic-type studies. Only 19% of the sample were taking full advantage of learning opportunities provided by their agencies though 52% were taking “some” advantage. Interestingly, there was considerable disagreement among missionaries from five of the seven missions on whether there was a *policy* requiring continuing education, and whether *funding* and the *time* needed for study was made available by mission administrators. This lack of clarity may indicate the low priority mission administrators place on continuing education. Perhaps most disturbing, however, was the failure of missionaries to use on-field mentors for learning. Only 10.7% had a mentor-learner relationship with a fellow missionary and 2.48% with one or more nationals!

While 44.6% rated “much” or “very much” intellectual development during their years on the field, a full 55.35% rated growth from “some” to *negative* growth. Emotional development rated “much” or “very much” for 43.84% of the subjects but worrying are the numbers who experienced little or negative emotional development (“+little” to “-little”, 19.82%). A few appear to rate themselves as actually having experienced emotional damage, (5.78% at “-much” or “-very much”). Generally, interpersonal development is high, with 45.56% at “much” or “very much” and 45.2% at “some.” However, probably at unacceptable levels, marital negative development stands at 14.05% while *negative* development in relationship with children stands even higher at 16.52% (both from “+little” to “uncertain”). Over half (51.42%) rated their communication skills poorly--from “some development” to

<sup>51</sup>The instruments did not ask for reasons why certain subjects were deemed to be of low value. It is possible that the formal and non-cross-cultural context of pre-field education and training may cause difficulty. For one thing, much of what is learned is geared to North American concerns. For another, when issues pertinent to the non-North American scene are raised, students have no experiential base on which to understand, integrate, and apply what they are hearing. Consequently, most of it is lost. This is why furloughing missionaries make more keen students of missiology than those with no cross-cultural experience. Thus, teachers who do not think and apply their subject matter interculturally and/or students who do not have intercultural experience cause transfer failure.

<sup>52</sup>The value identified here is the percentage which referred either to “some” value or “high” need (ie. the highest of the four-point Likert scale).



negative development. A quarter (25.57%) rated development of confidence from “little” to negative, or loss of confidence. Finally, 29.79% rated their feelings of control and independence poorly, from “little” to a sense of complete loss of independence and control.

Hill’s study of C&MA missionaries showed high sense of need for continued learning, expressed also through the levels of current need expressed by the subjects of this study. There appears to be a barrier between that desire and the ability to carry through in learning. One problem may be the difficulty of moving into a “life-long” mode of learning from an educational model based on teachers and facilitators, classrooms, set-times, expected production of learning through papers and exams, and other recognized elements of academia. Cast into the rigours, stresses, and difficulties of intercultural ministry, self-directed life-long learning with clearly defined personal objectives may well get caught in the crush.

A second problem may be indicated by the profile analysis findings on the relationship of *acculturation* to *ministry effectiveness*. The four factors D23, MD4, D12, and ND5<sup>53</sup> all showed that while those most acculturated had adequate ministry knowledge and skills, they also tended to struggle more with applying these skills to their ministry context. It is possible that genuine acculturation may make ministry effectiveness more difficult because previously accepted ministry knowledge, skills, and models are found to be inadequate for different cultural realities. It could be that ministry training which is effective for one culture may actually fail to prepare sufficiently for another. Once on the field, missionaries may find that parameters of knowledge, assumption, and experience have changed so that what was understood as acceptable ministry knowledge and skill no longer fits.

A third problem may be associated with the failure (or inability) of prior education and training to inculcate the skills of self-directed “*learning how to learn*” from one’s social and ministry environment.<sup>54</sup> As is the case with much formal education, missionary training tends to well-defined packages of cognitive knowledge with limited emphasis on affective and conitive/skills considerations. While it does an excellent job of theory, students often remain isolated from the environment in which ministry action will take place. In spite of advances in educational methodology for field-training internships and experiential

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<sup>53</sup>D23 “Identification with Traditional, Personal, and Interpersonal Values,” MD4 “Active Acculturation,” D12 “Knowledge of Cultural Ethos,” ND5 “Adaptation to Cultural Patterns of Thinking and Communicating.”

<sup>54</sup>This discussion on the implications of formal, nonformal, and informal education on the next few pages (pp. 450-465) are adapted from a paper written by this author for the 6th NFE (Non-Formal Education) Institute, Michigan State University, May 1985. Tables 163, 164, and 165, the models suggested by Wight and Hammons (p. 459), by Tom Boydell (p. 460), and by Ted Ward et. al. (p. 464) as well as the arguments by Schein and by Argyris and Schon on educational perspectives on theory--skills relationships (pp. 461-463) were all part of the research done by this author for his Master's thesis, “Bridging the Gap in Missiological Education,” (Grace Theological Seminary, 1983).

learning, seminaries and Bible colleges continue to ignore the essential need for such education.<sup>55</sup> F. Ross Kinsler expressed it this way,

...there is a strong cry for relevance to and involvement in the pressing problems of our society. This tendency seems to gain support from what educators have long advocated--that learning be related to life--and from what theological educators have constantly come up against--the fact that most seminary students have almost no previous experience in the church or the world. Many seminaries provide "involvement" through student action organizations, field work, special courses and lectures, and internship programs, but there is an unavoidable artificiality in all of these because seminary students, like the clergy they are to become, [all too often] aren't really part of the fabric of society.<sup>56</sup>

The preparation of missionaries for cross-cultural ministry is qualitatively different from that of preparation of scholars, researchers, or even technicians because of the unique **personal qualities, interpersonal skills, and specialized ministry capacities** needed for definitive involvement with people in their lives, work, communities, and societies. As described previously, these include such necessary traits as:

adaptability, emotional stability, ability to communicate, openness and sociability, sensitivity to people, patience and perseverance, initiative, humour, personal integrity, teammanship, submission to authority, ability to structure time and work, harmonious family relationships, humility, proper self image, self-discipline, sacrificial spirit, accessibility, wisdom and discretion in personal relationships, involvement with people, zeal in ministry, empathy with the hurts, fears, struggles, and joys of other people, flexibility, tolerance for ambiguity, ability to handle stress, etc.

Studies of missionary effectiveness<sup>57</sup> give equal emphasis to both professional skills and to human-relational skills. These skills relate more to affective and behavioural areas than to cognitive. Formal education has a difficult task inculcating such non-cognitive traits.

Harrison and Hopkins explain the problem,

With few exceptions, formal systems of higher education in the United States provide training in the manipulation of symbols rather than things; reliance on thinking rather than on feeling and intuition; and commitment to understanding rather than to action. These systems were designed originally for the training of

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<sup>55</sup>"To the extent that an educationally valid procedure is consistent with the revelational base of the church and the scriptural model of the pastor, it should be considered for use in theological education. Perhaps it is an appropriate understatement to note that among the fields of professional education that have seen dramatic qualitative improvement recently, theological education is not the fore-runner. Indeed, no other field of professional training behaves quite so much as if all discoveries have already been made." Ted Ward and Samuel F. Rowen "The Significance of the Extension Seminary" *Evangelical Missions Quarterly*, 9:1 (Fall 1972): 22.

<sup>56</sup>F. Ross Kinsler, "Extend the Seminaries," in *Theological Education by Extension*, Ralph Winter (ed.) (South Pasadena, CA.: William Carey Library, 1969), p. 245.

<sup>57</sup>William Gordon Britt, "Predicting Missionary Success Overseas Prior to Selection," Conference: Mental Health and Missions: A Second Conference, (Angola, Indiana: 1981), pp. 1 - 11. William Gordon Britt, "Pretraining Variables in the Prediction of Missionary Success Overseas," *Journal of Psychology and Theology* 11 (1983): 203 - 212. Larry N. Ferguson, et al., "Candidate Selection Criteria: A Survey," *Journal of Psychology and Theology* 11 (1983): 243 - 250. Marjory Foyle, "How to Choose the Right Missionary," *Evangelical Missions Quarterly* (1986): 196 - 204.



scholars, researchers, and professionals, for whom rationality, abstract knowledge, emotional detachment, and verbal skills are primary values.

Nothing...should be construed as suggesting that this kind of understanding is of *no* value or that it is totally irrelevant to overseas work. It does not, however, provide a trainee with all he needs overseas. Its weakness is that in those aspects of overseas performance having to do with interpersonal effectiveness the traditional model offers little help. This is a serious weakness. The experiences of all our overseas agencies--private, governmental, religious--have demonstrated that the human elements of overseas work are at least as important as the technical ones in the success of a job or mission, and that overseas personnel are much more likely to be deficient in these human aspects of work performance than in technical skills. The gravest problems of Peace Corps Volunteers, said David Reisman in a recent seminar on the Peace Corps as an educative experience, are 'emotional and interpersonal.'

The high degree of control and dependence upon authority so common in the college classroom does not lead to the development of a learning style facilitative of success in an overseas environment. This is not just because freedom is such a good thing and everyone ought to have a lot of it. It is because so much external control implies a dependency on experts and authorities for direction, information, and validation. When the learner is deprived of these sources of support, as he is almost certain to be in the overseas environment, he is in an uncomfortable and sometimes emotionally crippling situation. He not only must solve new problems in a new setting, but he must develop a new learning style, quite on his own. This experience--not knowing how to learn without traditional supports--may be productive of a good deal of the anxiety and depression grouped under the rubric, "culture shock." It is certainly responsible for much individual failure, even when it does not lead to chronic depression and anomie.<sup>58</sup>

Aryal further argues,

Structured and systematized education helps learners...make abstractions and generalizations, but at a great cost. *By its very nature academic learning tends to intellectualize about generic behaviors first and is concerned with generating actual behavior second. The consequence is that it creates a gap, and oftentimes a big gap, between conceptualization and translation of the conceptualization into actual behaviors....* Livingston observed that formal education programs 'overdevelop an individual's analytical ability, but leaves his ability to take action and to get things done underdeveloped.' ...By its very nature the school transmits knowledge more vertically than laterally.<sup>59</sup>

In a seminal article Harrison and Hopkins compared formal (University) with the type of education needed for competent intercultural work, identifying the unique goals and strengths of each. Table 163 shows the contrast between these two types of education.

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<sup>58</sup>Roger Harrison and Richard L. Hopkins, "The Design of Cross-Cultural Training: An Alternative to the University Model," The Journal of Applied Behavioral Science 3 (1967): 432-433, 434-435, 439.

<sup>59</sup>Chuda Nath Aryal, "Toward a Modal/ Substantive Definition of Education," unpublished mimeographed document, South Illinois University, 1976, p. 16.

TABLE 163: Contrasts in Educational Goals:<sup>60</sup>  
Traditional Formal Education vrs. Inter-cultural Education

SOME MAJOR GOALS OF FORMAL EDUCATION	SOME DIVERGENT GOALS OF OVERSEAS TRAINING
<p><b>Communication:</b> To communicate fluently via the written word and, to a lesser extent, to speak well. To master the languages of abstraction and generalization, e.g. mathematics and science. To understand readily the reasoning, the ideas, and the knowledge of other persons through verbal exchange.</p>	<p><b>Communication:</b> To understand and communicate directly and often nonverbally through movement, facial expression, person-to-person actions. To listen with sensitivity to the hidden concerns, values, motives of the other. To be at home in the exchange of feelings, attitudes, desires, fears. To have a sympathetic, <u>empathetic</u> understanding of the feelings of the other.</p>
<p><b>Decision Making:</b> To develop critical judgement: the ability to test assertions, assumptions, and opinions against the hard facts and the criteria of logic. To reduce susceptibility to specious argument and to be sceptical of intuition and emotion. To search for the best, most rational, most economical, and elegant solution.</p>	<p><b>Decision Making:</b> To develop ability to come to conclusions and take action on inadequate, unreliable, and conflicting information. To be able to trust feelings, attitudes, and beliefs as well as facts. To search for the <u>possible</u> course, the viable alternative, the durable though inelegant solution.</p>
<p><b>Commitment:</b> Commitment is to the truth. It requires an ability to stand back from ongoing events in order to understand and analyze them and to maintain objectivity in the face of emotionally involving situations. Difficult situations are handled by explanations, theories, reports.</p>	<p><b>Commitment:</b> Commitment is to people and to relationships. It requires an ability to become involved: to be able to give and inspire trust and confidence, to care and to take action in accordance with one's concern. Difficult situations are dealt with by staying in emotional contact with them and by trying to take constructive action.</p>
<p><b>Ideals:</b> To value the great principles and ideals of Western society: social justice, economic progress, scientific truth. To value the sacrifice of present rewards and satisfactions for future advancement of these ideals and to find self-esteem and satisfaction from one's contribution toward distant social goals.</p>	<p><b>Ideals:</b> To value causes and objectives embedded in the here-and-now and embodied in the groups and persons in the immediate social environment. To find satisfaction, enjoyment, and self-esteem from the impact one has directly on the lives of others. To be able to empathize with others who live mostly in the present and to work with them toward the limited, concrete goals which are important to them.</p>
<p><b>Problem Solving:</b> A problem is solved when the true, correct, reasonable answer has been discovered and verified. Problem solving is the search for knowledge and truth. It is a largely rational process, involving intelligence, creativity, insight, and a respect for facts.</p>	<p><b>Problem Solving:</b> A problem is solved when decision are made and carried out which effectively apply people's energies to overcoming some barrier to a common goal. Problem solving is a social process involving communication, inter-personal influence, consensus, and commitment.</p>

A major reason for the divergence between the traditional educational model and that effective for cross-cultural training is the underlying difference in the philosophy and objectives by which students are taught "how to learn." These objectives, called "meta-goals" of training,

<sup>60</sup>Ibid., pp. 435-436.



are approaches to learning and personal involvement which the learner acquires in the process of being educated in a particular system. In other words, meta-goals represent what the learner learns, in addition to the content of instruction, about how to approach and solve subsequent problems outside the classroom. They represent the problem-solving processes, the learning styles, which the trainee or student becomes committed to in the course of his educational experience. Meta-goals have to do with "learning how to learn."<sup>61</sup>

Since the major objectives of the two types of education are different, the underlying methods by which students are taught "how to learn" will also be different. The following are differences between the meta-goals of the two types of education.

**TABLE 164: Contrasts in Educational Meta-Goals:<sup>62</sup>**  
**Traditional Formal Education vrs. Inter-cultural Education**

META-GOALS OF TRADITIONAL FORMAL EDUCATION	APPROPRIATE META-GOALS FOR CROSS-CULTURAL TRAINING
<p><b>Sources of Information:</b> Information comes from experts and authoritative source through the media of books, lectures, audio-visual presentations. "If you have a question, look it up."</p>	<p><b>Sources of Information:</b> Information sources must be developed by the learner from the social environment. Information-gathering methods include observation and questioning of associates, other learners, and chance acquaintances.</p>
<p><b>Learning Settings:</b> Learning takes place in settings designated for the purpose, e.g., classrooms, and libraries.</p>	<p><b>Learning Settings:</b> The entire social environment is the setting for learning. Every human encounter provides relevant information.</p>
<p><b>Problem Solving Approaches:</b> Problems are defined and posed to the learner by experts and authorities. The correct problem-solving methods are specified, and the student's work is checked for application of the proper method and for accuracy, or at least for reasonableness of results. The emphasis is on solutions to known problems.</p>	<p><b>Problem Solving Approaches:</b> The learner is on his own to define problems, generate hypotheses, and collect information from the social environment. The emphasis is on discovering problems and developing problem-solving approaches on the spot.</p>
<p><b>Role of Emotions and Values:</b> Problems are largely dealt with at an ideational level. Questions of reason and of fact are paramount. Feelings and values may be discussed but are rarely acted upon.</p>	<p><b>Role of Emotions and Values:</b> Problems are usually value and emotion-laden. Facts are often less relevant than the perceptions and attitudes which people hold. Values and feelings have action consequences, and action must be taken.</p>
<p><b>Criteria of Successful Learning:</b> Favourable evaluation by experts and authorities of the quality of the individual's intellectual productions, primarily written work.</p>	<p><b>Criteria of Successful Learning:</b> The establishment and maintenance of effective and satisfying relationships with others in the work setting. This includes the ability to communicate with and influence others. Often there are no criteria available other than the attitudes of the parties involved in the relationship.</p>

<sup>61</sup>Ibid., p. 437.

<sup>62</sup>Ibid., pp. 437-438.

The two perspectives on "learning how to learn" identify with their respective environments. In the one, there are authoritative sources; in the other, learning from one's social environment. In the one, primary concern for effective verbalization of intellectual issues; in the other, concern for effective ministry. Integration of the primary and often opposite strengths of both formal<sup>63</sup> and non-formal<sup>64</sup> education makes training for cross-cultural ministry far more effective.

Education for cross-cultural applications should train the individual in a system of learning operations that is independent of settings, persons, and other information sources not found in the overseas environment. If the trainee can be educated to be an effective and independent learner, he need not be filled with all the information he can contain before going into his new job. He will have the capacity to generate his own learning as needed. Indeed, he will have to generate his own learning in any case, whether he is trained to do this or not, for the simple reason that no training agency can train for every exotic contingency, for every aspect of life and work in another culture.<sup>65</sup>

The following comparison of the formal and non-formal modes will help to clarify the uniqueness of the two types of education.

TABLE 165: Formal and Nonformal Educational Modes Contrasted<sup>66</sup>

FORMAL EDUCATION	NON-FORMAL EDUCATION
A. Purposes	
1. Long-term and general Formal education is expected to provide the basis for an individual's whole future life. Therefore...it is general in character.	1. Short-term and specific Non-formal education meets short-term learning needs of individuals... It therefore emphasizes the learning of specific knowledge and skills and the inculcation of specific attitudes...
2. Credential-based The end product of FE is the acquisition of qualifications and certificates which enable individuals to obtain specific socio-economic positions... Rewards are deferred.	2. Non-credential based Non-formal education produces learning which is immediately valued in the context of the individual's... situation. Rewards are tangible.

<sup>63</sup>Focused on abstraction, generalization, understanding the reasoning and ideas of others through verbalization, developing critical judgement, logic, objectivity, finding correct answers to problems, accuracy, academic ideals, etc.

<sup>64</sup>Focused on immediate answers to learner's needs, immediate application of learning, empathetic communication, learning the ability to come to conclusions on perhaps ambiguous information, using the social process for problem solving, relationships and involvement with people, community action, etc.

<sup>65</sup>Ibid.

<sup>66</sup>Tom Simpkins, Non-formal Education and Development, (Manchester, England: The University of Manchester, 1977), pp. 12-14.



**FORMAL EDUCATION****NON-FORMAL EDUCATION****B. Timing**

1. **Long cycle**  
FE programs are rarely less than one year. One level leads on to the next.
2. **Preparatory**  
Future-oriented...provides the basis for future participation...

1. **Short cycle**  
NFE programmes are quite short, rarely longer than two years. Length depends on the time needed to achieve learning.
2. **Recurrent**  
Depends on immediate learning needs arising from individual's role.

**C. Content**

1. **In-put centred and standardized**  
The basis of the curriculum is a well-defined package of cognitive knowledge with limited emphasis on affective or conative considerations. Content is standardized across large groups of learners.
2. **Academic**  
Curriculum tends to be founded in theory and isolated from the environment in which social action will take place.

1. **Out-put centred and individualized**  
NFE is task- or skill-centred and designed to produce specific changes in learners. Units are variable and related to the precise functional needs of individual participants or homogeneous groups.
2. **Practical**  
Curriculum is dictated by the particular uses to which the learning will be put and consequently is closely related to environment of the learners.

**D. Delivery System**

1. **Institution based**  
Formal education takes place in highly visible institutions whose sole purpose is educational.
2. **Isolated**  
Isolated from the socio-economic environment and from community activity. Learners are removed from their own environments for substantial periods of time.
3. **Rigidly structured**  
Rigidly structured around the parameters of time and the participant's age and/or performance. It involves uniform entry points, is graded into uniform units, is sequential and continuous.
4. **Teacher-centred**  
Emphasis tends to be on teaching more than on learning (i.e. in methodologies employed). Extensive use of members of teaching profession.

1. **Environment based**  
Non-formal education takes place in a variety of settings but emphasis is given to locales such as the work place or home which are not usually education-specific.
2. **Community-related**  
Conducted close to where learners live and work and the environment is functionally related to the learning which takes place.
3. **Flexibly structured**  
Varying degrees and types of structure, but a variety of relationships and sequences is possible within them.
4. **Learner-centred**  
Emphasis tends to be more on learning than on teaching (i.e. more learner-directed learning). A variety of personnel (often not professional educators) are used as facilitators rather than teachers.

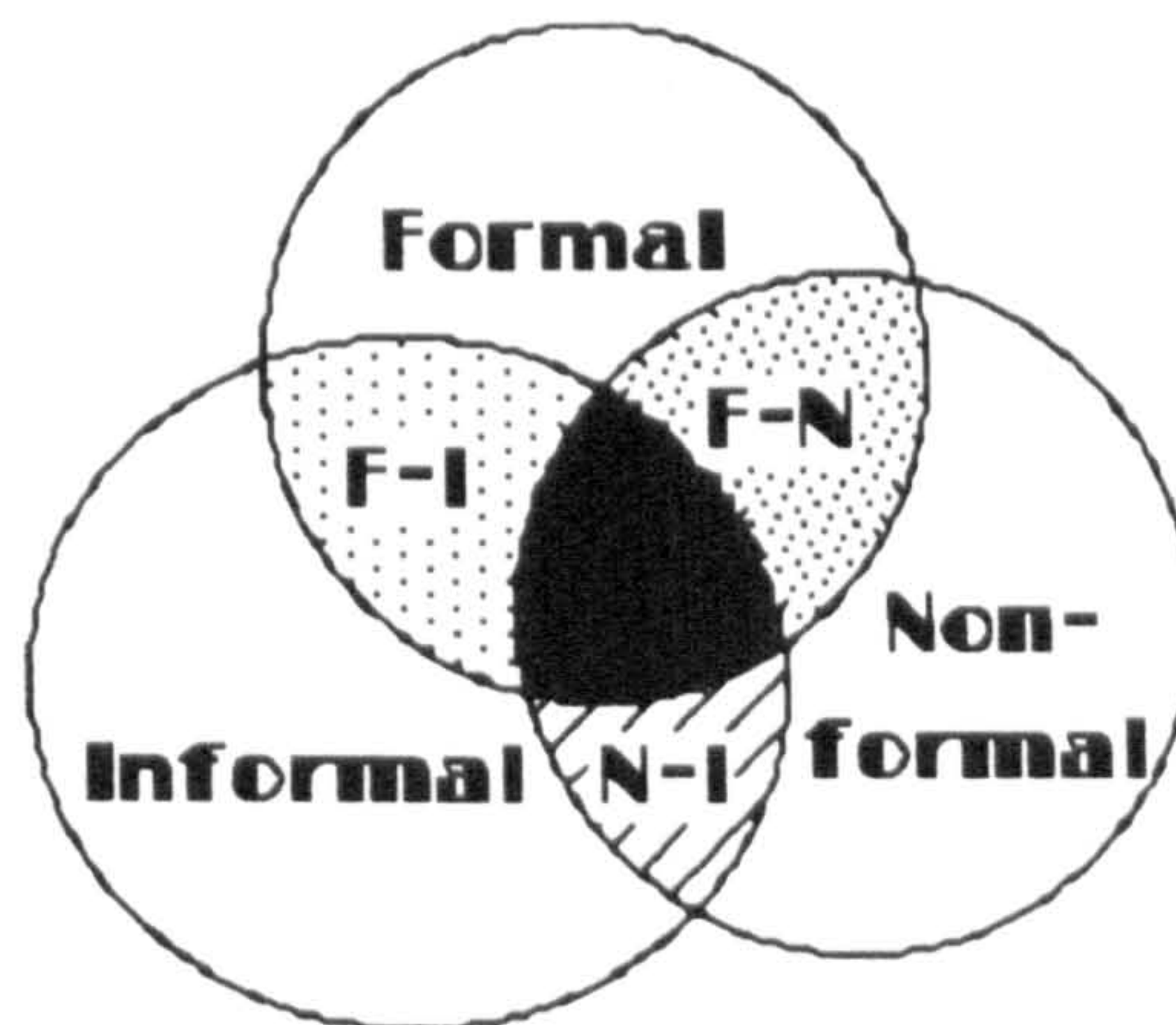


In the light of the unique capabilities of non-formal education, Cole Brembeck has stated the following hypotheses:

1. The unique characteristics of formal and nonformal education may be discovered in the structures of their respective learning environments.
2. These unique structural characteristics equip each to perform certain tasks better than others.
3. We have overloaded the formal system beyond its capacity with tasks it is not well suited to handle.
4. We underutilize the nonformal system in terms of certain of its unique capacities.
5. Prescriptions of reform of the formal system which ignore its structural capacity are exercises in futility.
6. One of the critical differences between the structural environments of education is their proximity to work, immediate action, and the opportunity to put to use what is learned. This difference is basic, for nonformal education is characteristically carried on within the context of action, work, and use. Formal education, on the other hand, takes place outside this context, just by dint of taking place within the school.
7. For this reason nonformal education is a better mode where the object is to change immediate action or to create new action, and formal education is superior where immediate action is subordinated to abstract learning or concept building, looking toward longer range change.
8. Future education policy must become total in the sense that it employs all the available means of education to meet increasingly diverse types of demands. The time when formal education could cope with all the learning demands of a complex society is past. We should realize it and adjust education policy accordingly.<sup>67</sup>

Tom Boydell has suggested this model with overlapping components:

**FIGURE 26: Interrelationships of Educational Formats<sup>68</sup>**



This figure shows the inter-relationships of the three modes of education. Non-formal education is deliberate, planned, staffed, and financed in the same way that formal education is. Therefore, it can fit into the graded expectations of the formal system.

<sup>67</sup>Cole S. Brembeck and Timothy J. Thompson, New Strategies For Educational Development, (Lexington, Mass.: Lexington Books, D.C. Heath and Co., 1973), pp. 58-59.

<sup>68</sup>Tom Boydell, Experiential Learning, (Sturminster, Dorset, England: Direct Design (Bournemouth) Ltd., 1976).



Conversely, it is aimed at being functional (immediately applicable), unrestricted as to time and place, and is focused on learner needs in the same way that informal education is. The individual's motives, personality, learning capacities, personal involvement, etc. will have bearing on the entire situation. This calls for personalized concern and interaction of the teacher/trainer with each student in encouragement, counsel, guidance, feedback, challenge, etc. The formal learning structure (classes, seminars, planning meetings, discussion groups) provide the opportunity for reflection, generalization, and strategizing. Such structures are essential.

Equally a part of the system are the informal learning expectations and opportunities, primarily in the ministry components, culture learning, social- situation involvements, interpersonal relationships, etc. The flow out of and contribute in turn to the formal learning times. Tying it all together is the learning climate, contributed by the direction and support set by the program coordinator, the interpersonal relationships with fellow students and teachers, the support and effectiveness of the team (if there is one), and the leadership.

Non-formal learning is based on the premises that 1) learning is achieved by the learner sorting things out for himself, and 2) meaningful learning occurs only as all three areas of cognition, affection, and conation are significantly tied together in the learning experience. As such, it is related to problems in the present rather than to abstractions or learning with future potential. Wight defines this type of learning as that

which begins with the experience followed by reflection, discussion, analysis, and evaluation of the experience. The assumption is that we seldom learn from experience unless we assess the experience, assigning our own meaning in terms of our own goals, aims, ambitions, and expectations.<sup>69</sup>

Out of such assessment come insights, discoveries, and understanding, which lead to conceptualized synthesis, as the experience takes on meaning in relationship to other experiences.

Since learning is a dynamic action process, the student learns best by participation. Since learning is to be meaningful in terms of future life ministry, the problems and experiences are to be meaningful and realistic. Rather than dealing with isolated events the non-formal experiential model calls for "process-learning" that begins with the experiences of a person, the process of problem-solving, the data or information that he collects, and the action he takes.

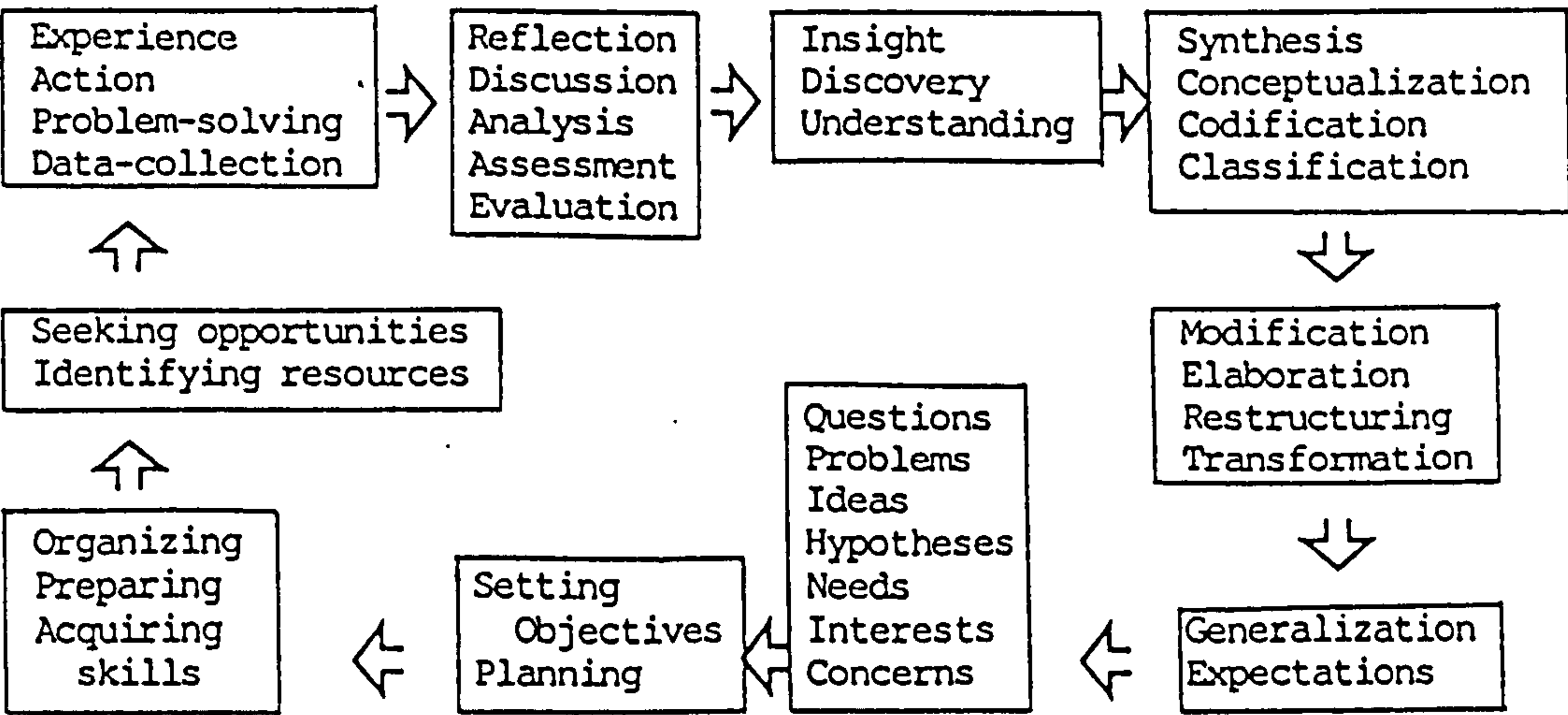
Albert R. Wight and Mary Anne Hammons have suggested a model which could be a framework for non-formal field training for cross-cultural ministry. This model demands that

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<sup>69</sup>Albert W. Wight, "Participative Education and the Inevitable Revolution," Journal of Creative Behaviour 4 (1970): 235.

the student be involved in on-site ministry which gives opportunities for this problem-and experience-oriented training to take place.

FIGURE 27: The Experiential Learning Model<sup>70</sup>



As shown above there is a series of steps that can be taken to learn how to handle problem situations. First, the experiences of an individual include almost anything that happens to him or her, such as the problems of cross-cultural living, or language learning, or interaction with nationals or team members, communicating the gospel, etc. Any particular problem experience needs to be identified, and defined. Possible approaches, perceptions, and interpretations of the problem are laid out. Collection of data about the problem is made for working toward a solution. Criteria are developed for evaluation of the solution proposed. Alternatives are generated and decision made for implementation of the best possible alternatives. This is the process of creative problem solving.

Next, reflection, discussion, analysis, and evaluation are made of the experience. This need to assess and evaluate the experience, preferably with others, helps to consolidate meaning and avoid potential bias. From this process come the insights, the discoveries, and understanding. The pieces fall into place, and the experience takes on added meaning in relation to other experiences.

All of this is then conceptualized, synthesized, and integrated into the individual's system of constructs through which he views, categorizes, and evaluates experience. The new understanding allows the student to modify, elaborate, restructure, or transform previously

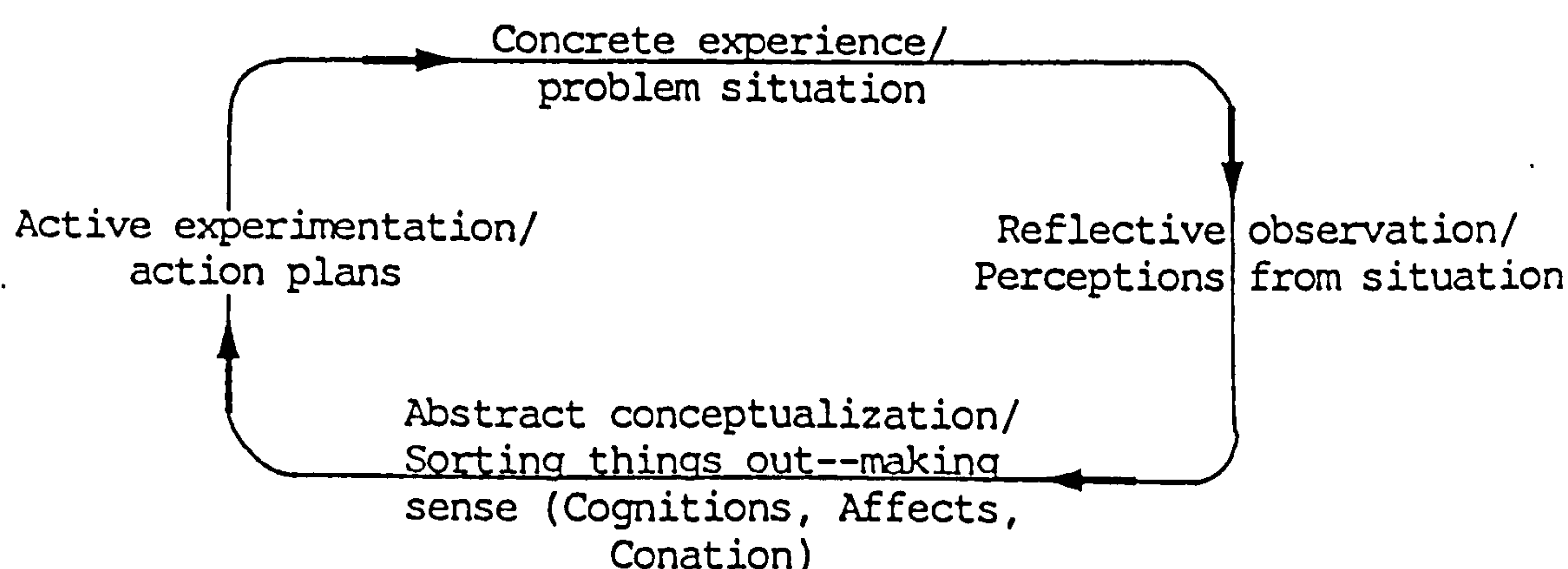
<sup>70</sup>Albert R. Wight and Mary Anne Hammons, Guidelines for Peace Corps Cross-Cultural Training, Part I: Philosophy and Methodology, (Estes Park, Colorado: Center for Research and Education for Office of Training Support, Peace Corps., 1970), p. 14.



held constructs and concepts. This process is necessary for moving into the world-view of another culture. The new concept or construct is viewed in relation to the total system of constructs and generalized in relation to past experiences or in anticipation of potential future experiences/problems.

Even as the more one learns the more he recognizes that there is more which he needs to know, so unanswered questions, problems, ideas, needs, and concerns will arise to be identified. This will lead to formulation of new objectives in terms of new needs and plans made to find their answers. Measures are taken to acquire additional skills, resources are identified, and the process begins again.

**FIGURE 28: The experiential process<sup>71</sup>**



The essence of non-formal experiential learning then is confronting the problem situation, sorting things out, and planning action to be taken on the basis of implications learned, in the following manner. This learning theory/strategy best of any meets the cross-cultural meta-goal of "learning how to learn" within situations where there are no authoritative sources of information. The student learns how to deal with problems, how to collect data needed for learning, and how to maintain a creative edge in finding solutions.

### **Experiential Training in Formal Education**

The tendency has been to assume that missionary candidates will either pick up missionary skills on the field when they get there or they will be trained by churches and mission boards. But who is really responsible for filling the gap between present training and field readiness--the schools or missions? In secular education schools training professionals, where the gap between theory and skills acquisition has been a thorny one, are increasingly dealing with the issue and taking responsibility for training skills.

<sup>71</sup>Tom Boydell, Experiential Learning, (Sturminster, Dorset, England: Direct Design (Bournemouth) Ltd., 1976), pp. 23-24.

Argyris and Schon have written that there are four perspectives on the relationship of basic cognitive theory and practice and skills. The first holds that to learn a sound theory of practice a student must get better basic theory. In other words, the responsibility of the school is to provide good basic theory and *leave it to the practitioners to derive and teach skills*.

This school of thought holds that teaching about practice is a diversion from the essential academic tasks; the school should develop and convey basic theory relevant to professional practice, and the [field] should provide opportunity to acquire professional skills.<sup>72</sup>

The problem with this position is that, though theory is essential, it is too often sufficiently removed from practice to make correlation and application difficult for the student. Tyler showed the importance of the interrelationship of the two areas:

Without theory, practice becomes chaotic, merely a collection of isolated individual cases. Theory gives meaning and clarity to what would otherwise be specific and isolated cases. Without practice, theory becomes mere speculation. The realities of practice provide a check upon pure speculation, a test of theory...<sup>73</sup>

Both areas of theory and practice compliment each other. Practice needs the framework of theory; theory needs the application of practice. Thus the academic study builds the base for learning, for patterns of inquiry and exploration, for seeing the whole, for gaining different perspectives, for theory building. On the other hand, practice allows the student to become acculturated to the requirements of the work situation, to learn to relate to people and situations, to learn to handle pressures, to have skills built and tested, and to learn what his weaknesses are.

The second perspective is that of "professional mystique." This position postulates that effective practice comes from intuition and a type of "*osmosis*," not from explicit formulation, even in principle. It is *gained through practice on the field and through association* with others of the profession, as in an apprenticeship. The problem with this is that skills learning is not a mystique. It is a complex but directable cognitive/experiential learning process. Institutes of Technology constantly involve this type of education. A problem for this position with missionary training is that apprenticeships are relatively uncommon on the mission field. Missionaries are usually too busy or too uncertain of how to go about it to spend the time and effort modelling and teaching skills to new candidates. This type of pastoral internship is more common, though the degree to which learning takes place depends on the degree to which the senior pastor takes it upon himself to teach. Often the "intern" merely does jobs the pastor doesn't like to do.

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<sup>72</sup>Chris Argyris and Donald A. Schon, Theory in Practice: Increasing Professional Effectiveness, (San Francisco: Jossey-Bass Inc., Publishers, 1974), p. 183.

<sup>73</sup>Ralph Tyler, Basic Principles of Curriculum and Instruction, (Chicago: The University of Chicago Press, 1950), p. 66.



The third position is that the school should teach the student to *think like a professional*, i.e. to think like a missionary, or a pastor. Having learned to "think" this way, the student will apply the skills. This position is highly cognition-oriented. The problem with this position is that to think "like a professional" requires student involvement as a professional which results in situations of practice.

A widely held fourth position requires *clinical practice alongside the learning of basic theory*. This position recognizes school responsibility in giving field training in conjunction with the receiving organizations. Alan Gartner writes,

...in the past ten to twenty years and increasingly during the past five years, major attention has been given to issues of design and structure of professional education. Central in these efforts to reshape professional preparation has been concern regarding ways and means of relating theory and practice, work and study.

With the preparation ensconced within colleges and universities, the problem was how to bring the value of the worksite experience to the academic. ...these efforts included longer exposure of the practitioners- in-training- to the worksite both at the beginning of preparation and at the end of the internship program. Concomitantly, there was a reduction in the percentage of time spent in the academic classroom and more time in "real" work situations. Closer exposure to the service system's consumer (client, patient, student) was the apparent goal of such efforts as having practitioners-in-training live in the local community and do work other than the traditional field placement setting.<sup>74</sup>

In social work education the practice component of the training is introduced at the beginning of the training and between 40 to 60 percent of the student's time is devoted to field experience. In medicine and education the theoretical foundation is normally laid first and then follows rigorous field experience. A third to a half of the last two years of the undergraduate medical program is spent in clinical clerkship, while up to two years of internship and residency are almost entirely clinical. Legal programs begin with field experience in the third year in most cases. Obviously, professional schools take clinical training seriously! Missionary-training colleges should take it just as seriously.<sup>75</sup>

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<sup>74</sup>Alan Gartner, *The Preparation of Human Service Professionals*, (New York: Human Sciences Press, 1976), p. 214.

<sup>75</sup>But do not most Bible Colleges and Seminaries require "internships" and Christian Service with the same concern. Yes, they do. As for Christian service, in most North American missionary training colleges it does not qualify as clinical training. Dr. S. A. Witmer (past president of the AABC) explains why. "We can be thankful to God for the large amount of service performed by our students in many different areas of human need, but there is little room for self-congratulations when we realize that we have done little more than scratch the surface in exploiting the training values of field work. What accents weaknesses in Christian service is that until recently there has been little self-analysis, little imagination in conducting Christian service programs. It is unthinkingly and uncritically assumed that students would receive training automatically without conscious direction or expert supervision by simply carrying out an assignment. Conducting a Christian service program consisted, therefore, of listing openings; assigning students to them; receiving reports on how many times Sunday School classes were taught, the number of tracts distributed, the number of mission services attended; and then compiling a master file and recording the summaries on student's permanent records. It was all done quite complacently for few questions were raised about the validity of these

The problem for missiological education is in the integration and implementation of both formal and non-formal educational methodologies. Edgar Schein has identified basic barriers as 1) attitudes and perspectives of faculty members committed to the traditional academic mold, 2) the structural rigidities of academic administrative procedures, calendars, curricula, and buildings, and 3) the structural rigidities of early career paths and occupational socialization practices.<sup>76</sup> When non-formal education becomes recognized as complementary to formal education,<sup>77</sup> it may be necessary for Colleges and Seminaries preparing missionaries to rethink their educational philosophies and the resultant curricular structures. Figure 29 on the next page shows how these types of education can be functionally inter-related.

Schooling as socialization is learning in the informal atmosphere of the school. As formalization, education occurs in the format with which we are familiar--the classroom and library. The non-formal mode of education is seen in the lower left-hand corner as extension. Note that it is more flexible but at the same time is deliberately planned as part of the educational program. There is deliberate policy to determine that learning is indeed taking part which will be truly educational. This means that deliberate effort is made by the school administration to utilize the potential of non-formal education, possibly in

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procedures." S. A. Witmer, Report on Preparation of Missionaries in Bible Institutes and Bible Colleges, (Fort Wayne, Indiana: Accrediting Association of Bible Colleges, 1959,1960), p. 102.

Required internships tend to be inadequate for two reasons. First, there is usually inadequate correlation of schooling with hands-on experience. (Compare with medical internship and the enforced responsibility!). Secondly, the time factor is insufficient, not allowing for the stretch necessary for in-depth learning. The following definition (developed by this author in conjunction with 2 other mission executives at a workshop in Farmington, Illinois, in 1980) indicates the scope of an internship:

Missionary internship is a structured, hands-on, in-service training program, focused primarily upon the experiential aspects of missionary development and training, conducted in a supervised (reflective and supportive) setting, geared for prospective missionaries who already have academic and spiritual preparation for the task.

Its primary goals are to significantly improve levels of competency by providing experiences that lead to 1) personal development in affective areas, 2) sharpening of necessary skills and gifts, and 3) enhancing the trainees' ability to draw upon the external and internal sources available for successfully responding to challenges which are faced.

Necessary elements include 1) selection expectations and procedures, 2) definition of context and objectives of field setting, 3) definition of field training content and required learning experiences, 4) control expectations--evaluation, supervision, etc., and 5) establishment of school--agency training inter-relationships.

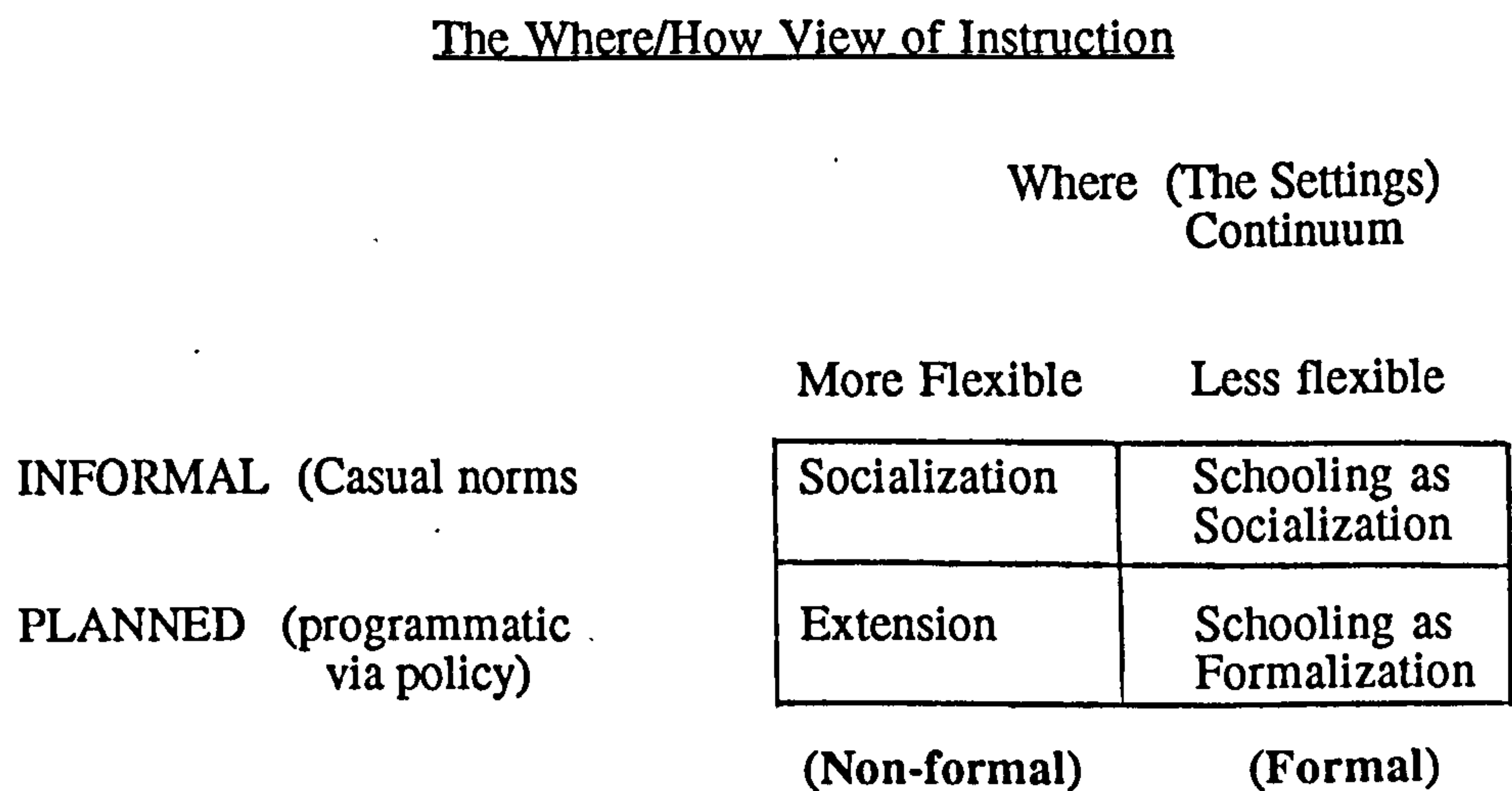
Thus an internship has to fit into the totality of the student's educational program, not just act as an adjunct to it. It requires the same careful planning as the formal phase of the training.

<sup>76</sup>Edgar H. Schein, Professional Education, (Berkeley, CA. : Carnegie Commission on Higher Education, 1972), p. 97.

<sup>77</sup>Non-formal education has been defined and utilized in very diverse ways, from anti-schooling concepts (Illich and Friere) to "para-schooling" concepts (an alternative to the schooling system for educating out-of-school adults and youth) to complementary concepts (a parallel educational methodology, part with the formal system to accomplish what the formal system alone cannot do). This discussion follows the "complementary approach" in its philosophical perspective.



Figure 29: Educative Function in a Society as Reflecting the Settings and Modes of Instruction<sup>78</sup>



“co-operative education” in conjunction with mission societies, churches, and other organizations involved in Christian ministry. The following elements will be essential to any such integration:

1. Education of any kind is based on a body of knowledge and theory. Even field learning requires a conceptual base to support learning from experience and to enable students to generalize from their experiences.<sup>79</sup>
2. Planned non-formal programs should be ministry based--dealing with existing, real situations in the community. Good as films, observations, simulations, etc. are they lack the power of real participation. The community experiences must have clear learning purposes relating to both the general curriculum, to felt-needs of the learner, and to skill- and task-oriented learning growth in the student. Obviously this removes the student from the class-room for on-field functional learning. Furthermore, this field experience must be of sufficient length to accomplish the learning intended.
3. Students need to be involved in the process of identifying ministry issues, problems, possibilities, and needs, in planning the approaches and methodologies to be used in carrying out the ministry, and in evaluating what the results are.
4. Orientation, guidance, and feedback are essential in pursuing the non-formal experiential learning cycle (described above) to enable students to clarify cross-cultural problem areas, learn the process of finding solutions from the social environment, apply

<sup>78</sup>Ted W. Ward, et al., Effective Learning In Non-Formal Education. (East Lansing, Michigan: Michigan State University, 1974), p. 42.

<sup>79</sup>The "rail-fence analogy" for education calls for a "cognitive input rail" in the fence that is equally as strong as the "field experiences rail." See Ted Ward and Samuel Rowen, The Rail Fence: An Analogy for the Education of Professionals (Holt, Mich.: Associates of Urbanus, 1970).

solutions found, analyze the results, and conceptualize new understanding from this. This means that students will think through the problem, gather information first hand, conceptualize application, take action, and evaluate.

It must be remembered that nonformal educational components of training do not “just happen.” There must be planning for it that is a carefully thought through as is planning for formal education. There must be a carefully constructed philosophy, well devised learning objectives, learning experiences that will accomplish those learning objectives, formative and summative evaluation to see if objectives are being accomplished, and much coordination with and possibly training of “field co-ordinators” or “field trainers” with other organizations. It is actually likely to be more difficult to develop an excellent nonformal training program than to develop and maintain formal education for which there have been centuries of models, experimentation, and developmental change.

### ***Summary of the Implications of this Research on Missionary Education and Training***

1. Educational philosophy, objectives, methodology, and evaluative methods must take into account as much of the total paradigm of cross-cultural ministry competence as possible, as well as research on the basic issues, problems, stressors, and needs of field missionaries. Rather than beginning educational planning from a historical and traditional perspective, a field-based, competency-oriented approach should be taken, generally utilizing ministry criteria to determine curricular requirements. While it is true that there is a broad knowledge base which must be taught and which cannot be determined solely by field criteria, academic institutions should be willing to reassess their academic orientations, taking researched field-ministry skills into account.
2. It is inadequate for missiology to be taught as a body of knowledge without training in equivalent skills. This was demonstrated by the finding that there were those concerned about contextualization who were unable to do so for all their study and efforts on the field. It is also demonstrated in the attrition on-field from ministries such as church-planting because of the failure of training to integrate philosophy, ministry skills, and requisite personal development.
3. Pre-field training given by missions appears to be important for those in their first one or two years. Thereafter, continuing education must be encouraged. Missionaries in the study were rather poor in utilizing learning resources offered by their agencies. Relatively few were working on further formal education.
4. It is clear that there were those who were skilled at learning experientially on site and those who were not so skilled. It would appear that mission agencies (and theological schools) should give more emphasis (and training) in “learning how to learn” from the



social and ministry environment. As already mentioned, this is a qualitatively different kind of learning which may be difficult for formal schools to teach.

5. Because no one institution can adequately handle all components of formal and non-formal education, there should be close cooperation between academic institutions and mission organizations for careful planning and implementation of comprehensive, interactive pre-field (and possibly on-field) training.
6. The fact that only 32.3% of the subjects sampled who had taken graduate or post-graduate studies indicated that their studies had been exactly what was needed may indicate that seminaries and graduate schools have curricula and programs that are too inflexible. The data suggests that there should be greater concern with androgogical principles<sup>80</sup> and with opening curricula to greater flexibility and choice on the basis of need and personal objectives, especially at the graduate level.

### Suggestions for Future Research

While a number of studies have been done on missionary problems and stresses, very few (if any) have been done on cross-cultural ministry *competence*. Equally few studies have been done to identify the *criteria* of effective cross-cultural ministry. Kennedy and Dreger stated it well when they said,

“Millions of dollars are spent annually to recruit, train, and maintain this body of overseas personnel [missionaries]. Despite the involvement of a large number of people and the vast expenditures of money, however, little is known about the quality of services being rendered, the elements which make for effective overseas performance, and the personal characteristics and experiences needed to succeed in missionary service. This lack of knowledge regarding the efficacy of the missionary enterprise has prevented the establishment of criteria for measuring overseas missionary performance and, consequently, the selection of predictors of these criteria.”<sup>81</sup>

Because so little research has been done, this study, though utilizing qualitative, empirical measures, is *exploratory* in that it was breaking new ground. Not only does this study need to be replicated but further, more stringent research could well be carried out on each of the dimensions associated with the concept of competence.

A second study using more refined instruments could be undertaken on a larger sample of subjects from more missions and from various parts of the world so that

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<sup>80</sup>One of these principles of adult education states that adults are more interested in immediate solving of problems that they face or are experiencing than with information that *may be needed* sometime in the future (as is the case in pedagogy--the teaching of children). Adults want any formal education to speak immediately to the ministry they are involved in. For an excellent treatment of androgogical principles see Malcolm Knowles, The Modern Practice of Adult Education, (New York: Association Press, 1970).

<sup>81</sup>Patty Weaver Kennedy and Ralph Mason Dreger, "Development of Criterion Measures of Overseas Missionary Performance," Journal of Applied Psychology 59 (1974): 69.

*comparative analysis* might be made to see how competence predictors and criteria differ between Latin America, Africa, the Middle East, Eastern and Western Europe, North America, and different areas in Asia. As with this study, the researcher would have to *personally* collect data on site, not only from missionaries but also from colleagues and nationals, in order to reduce loss of data associated with mailed questionnaires.

An alternative (and more valuable) approach might include both *quantitative and qualitative* data collection using instruments as well as direct and/or participant observation and interview methodologies. While the effort and expense (both in time and funds) would be greater, this approach yields more comprehensive data than does quantitative research. Elements of attitude, behaviour, interaction, reaction (to stress, problems, etc.), support, and other parameters of missionary competence can be identified which would normally escape quantitative research alone.

Perhaps the most ideal approach, but one which would also take much effort and expense, would be a longitudinal study using predictor instruments administered during pre-field missionary candidacy, followed up with quantitative and qualitative studies done on the same subjects from time to time over a period of ten years. This would produce the most results on acculturative processes and problems, personal and spiritual dynamics, and ministry criteria. Every effort would have to be made to collect data under controlled conditions to make sure that all subjects were followed through, including those who left the field.

While the instruments used in this study appear to have been highly successful in identifying criteria and predictors, they could well be redesigned and streamlined. Items that are redundant need to be eliminated. The “Personal Growth” and “Ministry Growth” instruments need to be further tested and probably expanded to adequately test these areas. While the “Acculturation/ Contextualization” Scale was shown to be adequate in pre-testing and through this study, it needs further development and special testing on its own, apart from the rest of the study. There was too much data overall to give these tests adequate attention.

The “Spiritual Dimensions” instrument was also a new test, and, considering the “lack of normative standards” for spiritual formation,<sup>82</sup> could well be further developed and expanded. Comparing subject responses between “ideal values” and “real values” was a further validation that in this study there was little of the skew commonly associated with self-report. Finally, special study could be profitably done just on “support structures” available to missionaries as they face specific problems. It is the conclusion of this researcher that the very length of the questionnaire had missionaries too tired to be able to adequately

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<sup>82</sup>Timothy Gene McKee, A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala, Volume I, *idem.*, p. 286.



answer Section 7” support questions by the time they got to it. As a consequence, data from that portion of the questionnaire specific to *support received* by missionaries to enable them to handle the stresses of life and ministry was not even included in this study.

Other questions raised by this study call for further research. For example, how do the relationships of the total education/training paradigm relate to the processes of change in a missionary candidate’s values and world views? To what extent must an individual’s values and world views accommodate to the host culture in order for him/her to be effective in ministry? To what extent and how do biblical perspectives (and personal and religious conservatism) affect value and world view shifts? How does the process of acculturation relate to a individual’s theology of “incarnational identification” and to what extent is it affected by it? Why are spiritual dynamics so influential on competence and how do these relate to personal characteristics?

In relationship to contextualization and ministry competence further research questions might include: “What are the relationships of knowledge and learning approaches, motivation and desire, and ministry skills for effective contextualization? How much of each is needed for effective contextualization to take place?” “Does the present emphasis on contextualization in missiological training and publishing produce the desire but not the know-how for contextualized ministry to take place?” “To what extent do personality and spiritual dynamic affect the ability to contextualize ministry?” “How do types of formalized ministries affect the extent to which contextualization can take place? What are the hindrances to contextualized ministry within academics? within types/models of church-planting? within support ministries?”

The profile of missionary competence developed by this study needs historical and contemporary validation. It would be interesting to know the extent to which “effective” missionaries of the past displayed the characteristics of the profile. Studies of contemporary missionaries deemed by their colleagues and by nationals and the national church to be competent could be developed, not only as they validate or question the profile but as they augment it. Finally, theory-generation from a missiological standpoint is greatly needed, especially as it adds its own unique perspective to the growing body of literature on competence. But for new theories to be generated further careful empirical research will be needed.

## Summary

This chapter began by evaluating research hypotheses and questions in light of the data. It was demonstrated that language proficiency and social involvement are positively correlated to acculturation as is the ability to contextualize ministry. On the other hand, careful study of the culture and national Church does not necessarily mean that an individual

has an increased ability to contextualize ministry. It was further determined that level of educational background does not necessarily increase cross-cultural ministry competence, nor does personal satisfaction with one's ministry mean that it is effectual. The most important single factors on competence appeared to be spiritual dynamics and personal characteristics.

Then, an extensive profile of missionary competence was developed out of the predictors and criteria generated by this study. This profile covers dimensions of ministry readiness, cognitive, affective, and behavioural components, ministry skills, indicators of social interaction and inter-personal skills, spiritual dynamics, and areas of personal and family growth. Finally, there was discussion on the implications from the data on missionary education and training, followed by suggestions for further research.

The breadth of criteria and predictors which were developed and empirically verified through this research has resulted in a comprehensive profile of missionary competence. While it remains for this profile to be validated through replications of this study, its "fit" with theory and models in both competence and missiological literature is satisfactory. The results have made the study worthwhile.



**Bibliography**

- Abe, Hiroko and Wiseman, Richard L., "A Cross-Cultural Confirmation of the Dimensions of Intercultural Effectiveness." International Journal of Intercultural Relations 7 (1983): 53 - 67.
- Adelman, Mara B., "Theoretical Perspectives on Social Support and Cross-Cultural Adjustment," Paper presented at the annual SIETAR Conference, Montreal , 1987.
- Adelman, Mara B., "Cross-Cultural Adjustment: A Theoretical Perspective on Social Support." International Journal of Intercultural Relations 12 (1988): 183 - 204.
- Adler, Nancy J. and Kiggundu, Moses N., "Awareness at the Crossroad: Designing Translator-based Training Programs." In Handbook of Intercultural Training: Issues in Training Methodology, pp. 124 - 150. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 2. New York, N.Y.: Pergamon Press, 1983.
- Adler, Peter S., "The Transitional Experience: An Alternative View of Culture Shock." Journal of Humanistic Psychology 15 (1975): 13 - 23.
- Adler, Peter S., "Beyond Cultural Identity: Reflections upon Cultural And Multicultural Man." In Culture Learning Concepts, Applications & Research, pp. 24 - 41. Edited by Richard W. Brislin. Honolulu, Hawaii: East-West Center, University of Hawaii Press, 1977.
- Adler, Peter S., Culture Shock and the Cross Cultural Learning Experience. Unpublished paper, n.d.
- AFS International/Intercultural Programs Inc., "Assessing the Candidate." In Theory Into Practice Series, No. 1, pp. 1-12. Edited by New York, NY: AFS International/Intercultural Programs, Inc., 1984.
- Albrecht, T.L. and Adelman, Mara B., "Social Support and Life Stress: New Directions for Communication Research." Human Communication Research 11 (1984): 3-32.
- Albrecht, T. L. and Adelman, Mara B., "Communicating Social Support: A Theoretical Perspective." In Communicating Social Support, pp. 18-40. Edited by T. L. Albrecht, Mara B. Adelman and Associates. Newbury Park, CA: Sage, 1987.
- Allaire, F. and Joly, Y., "Étude sur le Role du Cooperant Canadien d'ACDI en Afrique Francophone." Montreal: I.F.G., Inc., 1974.
- Allard, Marvel J. and Wrigley, Charles, "Age Differences in Volunteers' Reactions to Overseas Service." Lansing, Michigan: Michigan State University, 1965.
- Allen, R. R. et al., "The Nature of Communication Competence." In Developing Communication Competence in Children, pp. 247 - 255. Edited by R. R. Allen and Kenneth L. Brown (eds). Skokie, IL: National Textbook Company, 1976.
- Allen, Frank, "Why Do They Leave? Reflections on Attrition." Evangelical Missions Quarterly 22 (1986): 120-123.
- Amir, Yehuda, "Contact Hypothesis in Ethnic Relations." Psychological Bulletin 71 (1969): 319 - 342.
- Amir, Yehuda, "Perceptual Articulation in Three Middle Eastern Cultures." Journal of Cross-Cultural Psychology 6 (1975): 406 - 416.

- Anderson, Barbara Gallatin, "Adaptive Aspects of Culture Shock ." American Anthropologist 73 (1971): 1121 - 1125.
- Applegate, James L. and Leichty, Gregory B., "Managing Interpersonal Relationships: Social Cognitive and Strategic Determinants of Competence." In Competence in Communication: A Multi-Disciplinary Approach, pp. 33 - 55. Edited by Robert N. Bastrom. Beverly Hills, CA.: Sage Publishing, 1984.
- Argyle, Michael, "Interaction Skills and Social Competence." In The Social Psychology of Psychological Problems, pp. by Philip Feldman and Jim Orford. Chichester, England: John Wiley and Sons, 1980.
- Argyle, Michael, "Social Skills and the Analysis of Situations and Conversations." In Handbook of Social Skills Training, pp. 185 - 216. Edited by Clive R. Hollin and Peter Trower. International Series in Experimental Social Psychology Vol. 12, 2. London, England: Pergamon Press, 1986.
- Argyle, Michael, Furnham, Adrian and Graham, Jean Ann, Social Situations. Cambridge: Cambridge University Press, 1981.
- Argyris, Chris, "Explorations in Interpersonal Competence - I." The Journal of Applied Behavioral Science 1 (1965): 58 - 83.
- Argyris, Chris and Schon, Donald A., Theory in Practice: Increasing Professional Effectiveness. San Francisco: Jossey-Bass Inc., Publishers, 1974.
- Arndt, Richard J. and Lundquist, Stanley, "Twenty to Fifty Percent Fail to Make It-- Why?" Evangelical Missions Quarterly 12 (July 1976): 141-146
- Aryal, Chuda Nath, "Toward a Modal/ Substantive Definition of Education." Unpublished paper. South Illinois University, 1976.
- Asuncion-Lande, Nobleza C., ed., Culture Shock and The Intercultural Communicator. Topeka, KS: University of Kansas, 1979.
- Asuncion-Lande, Nobleza C., "On Re-entering One's Culture." NAESA Newsletter (1980): 142-143.
- Asuncion-Lande, Nobleza C., "Perspectives on Experiential Learning in Inter-cultural Communication," Paper presented at the Annual International Meeting of the Communication Association of the Pacific, Tokyo, Japan, June 10-11, 1978.
- Baker, James C. and Ivancevich, John M., "The Assignment of American Executives Abroad: Systematic, Haphazard or Chaotic?" California Management Review 13 (1971): 39 - 44.
- Ball, Gordon D. S., "Value Change As A Result Of Overseas Experience: A Study of Differences in Value Orientations Among CUSO Volunteers Before and After Overseas Service." M.A. Thesis, McGill University, 1969.
- Bandura, Albert, "Self-efficacy: Toward a Unifying Theory of Behavioral Change." Psychological Review 84 (1977): 191 - 215.
- Barna, LaRay M., "Intercultural Communication Stumbling Blocks." In Intercultural Communication: A Reader, pp. 291 - 298. Edited by Larry Samovar and Richard Porter. Belmont, CA.: Wadsworth Publishing Co. , 1976.



- Barna, LaRay M., "The Stress Factor in Intercultural Relations." In Handbook of Intercultural Training: Vol. 2: Issues in Training Methodology, pp. 19 - 49. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, New York, N. Y.: Pergamon Press, 1983.
- Barna, Laray M., "Stumbling Blocks in Intercultural Communication." In Intercultural Communication: A Reader, pp. 322 - 330. Edited by Larry Samovar and Richard E. Porter. Wadworth, Inc., 1988.
- Barnett, George A. and Kincaid, D. Lawrence, "Cultural Convergence: A Mathematical Theory." In Intercultural Communication Theory, pp. 171 - 194. Edited by William B. Gudykunst. International and Intercultural Communication Annual, VII. Beverly Hills, CA: Sage Publishing, 1983.
- Barnett, H. G., Broom, Leonard, Siegel, Bernard J., Vogt, Evon Z. and Watson, James B., "Acculturation: An Exploratory Formulation." American Anthropologist 56 (1954): 973 - 1002.
- Barrett, Jeffrey, "Dependency Syndrome." Foreign Service Journal (1985): 23 - 25.
- Baumgardner, Mary L., "Transforming Culture Shock." M.A. Thesis, University of Northern Colorado, 1976.
- Baxter, James, "English for Intercultural Competence: An Approach to Intercultural Communication Training." In Handbook of Intercultural Training, pp. 290 - 323. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 2 - Issues in Training Methodology. New York: Pergamon Press, Inc., 1983.
- Beattie, Geoffrey W., "The Skilled Art of Conversational Interaction: Verbal and Nonverbal Signals in its Regulation and Management." In The Analysis of Social Skill, pp. 193 - 211. Edited by W. T. Singleton, P. Spurgeon and R. B. Stammers. New York: Plenum Press, 1980.
- Befus, Constance P., "A Multilevel Treatment Approach for Culture Shock Experienced by Sojourners." International Journal of Intercultural Relations 12 (1988): 381 - 400.
- Bell, Robert A., "Social Involvement." In Personality and Interpersonal Communication, pp. 195 - 242. Edited by James C. McCroskey and John A. Daly. Sage Series in Interpersonal Communication, 6. Beverly Hills, CA.: Sage Publishing, 1987.
- Bellamy, Wilfred, "Personnel for Tomorrow's Mission." In Evangelical Missions Tomorrow, pp. 107-112. Edited by Wade T. Coggins and Edward L. Frizen. South Pasadena, CA: William Carey Library, 1977.
- Bennett, Janet, "Transition Shock: Putting Culture Shock In Perspective." In International and Intercultural Communication Annual, pp. 45 - 52. Edited by N. C. Jain. 4. Falls Church, VA: Speech Communication Association, 1977.
- Bennett, Janet Marie, "Modes of Cross-Cultural Training: Conceptualizing Cross-Cultural Training as Education." International Journal of Intercultural Relations 10 (1986): 117 - 134.
- Bennett, Milton J., "A Developmental Approach to Training for Intercultural Sensitivity." International Journal of Intercultural Relations 10 (1986): 179 - 196.
- Bennett, Milton J., "Towards Ethnorelativism: A Developmental Model of Intercultural Sensitivity." In Cross Cultural Orientation, pp. 27 - 69. Edited by Michael Paige. New York: University Press of America, 1986.

- Bennis, Warren G., Schein, Edgar R., Steele, Fred A. and Berlew, David E., "Towards Better Interpersonal Relationships." In Interpersonal Communication: A Relational Perspective, pp. 65 - 80. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN: Burgess Publishing Company, 1980.
- Benson, Philip G., "Measuring Cross-cultural Adjustment: The Problem of Criteria." International Journal of Intercultural Relations 2 (1978): 21 - 37.
- Berger, Charles R., "Interpersonal Communication Theory and Research: An Overview ." In Interpersonal Communication: A Relational Perspective, pp. 3 - 16. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co. , 1986.
- Berger, Charles R. and Calabrese, Richard J., "Some Explorations in Initial Interaction and Beyond: Toward a Developmental Theory of Interpersonal Communication." In Interpersonal Communication: A Relational Perspective, pp. 50 - 62. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN: Burgess Publishing Company, 1980.
- Berger, Peter L. and Luckman, Thomas, The Social Construction of Reality. Garden City, New York: Doubleday and Company, Inc., 1967.
- Berry, John W., "Acculturation as Varieties of Adaptation." In Acculturation: Theory, Models, and Some New Findings, pp. 9 - 25. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.
- Berry, John W., Kim, Uichol and Boski, Pawel, "Psychological Acculturation of Immigrants." In Cross-Cultural Adaptation: Current Approaches, pp. 62 - 89. Edited by Young Yun Kim and William B. Gudykunst. International and Intercultural Communication Annual, 11. Beverly Hills, CA: Sage Publishing, 1987.
- Bilmes, Jack and Boggs, Stephen T., "Language and Communication: The Foundations of Culture." In Perspectives on Cross-Cultural Psychology, pp. 47 - 76. Edited by Anthony J. Marsella, Roland G. Tharp and Thomas J. Ciborowski. New York: Academic Press, 1979.
- Birdwhistell, Ray L., Kinesics and Context: Essays on Body Motion Communication. New York: Ballentine Press, 1970.
- Blue, Jefferey L. and Ulric Haynes, Jr. , "Preparation for the Overseas Assignment ." Business Horizons (1977): 61 - 67.
- Blumer, Herbert, "Symbolic Interaction." In Culture and Cognition: Rules, Maps, and Plans, pp. 65 - 83. Edited by James P. Spradley. San Francisco, CA.: Chandler Publishing Co., 1972.
- Bochner, Arthur P. and Kelly, Clifford W., "Interpersonal Competence: Rationale, Philosophy, and Implementation of a Conceptual Framework." In Interpersonal Communication: A Relational Perspective, pp. 81 - 99. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co., 1980. Also published in The Speech Teacher 23 (1974): 279 - 301.
- Bochner, Stephen, "The Mediating Man and Cultural Diversity." In Culture Learning: Concepts, Applications and Research, pp. 3 - 17. Edited by Richard W. Brislin. Honolulu, HI: East-West Center, University Press of Hawaii, 1977.
- Bond, Michael H., "Mutual Stereotypes and the Facilitation of Interaction Across Cultural Lines." International Journal of Intercultural Relations 10 (1986): 259 - 276.



- Boss, Pauline Grossenbacher, McCubbin, Hamilton I. and Lester, Gary, "The Corporate Executive Wife's Coping Patterns in Response to Routine Husband-Father Absence." Family Process 18 (1979): 79 - 86.
- Bowerman, William R., "Subjective Competence: The Structure, Process and Function of Self-Referent Causal Attributions." Journal of the Theory of Social Behaviour 8 (1978): 45 - 75.
- Bowers, Joyce M., "Roles of Married Women Missionaries; A Case Study," Paper presented at the 5th Conference on Mental Health and Missions. Angola, Indiana, 1984.
- Bowers, John Waite, Metts, Sandra M. and Duncanson, W. Thomas, "Emotion and Interpersonal Communication." In Handbook of Interpersonal Communication, pp. 500 - 550. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA.: Sage Publishing, 1985.
- Boydell, Tom, Experiential Learning. Sturminster, Dorset, England: Direct Design (Bournemouth) Ltd., 1976.
- Bramble, N., "Criterion-Referenced Training." Peace Corps Program and Training Journal 1 (1973): 2-138.
- Brandt, David R., "On Linking Social Performance with Social Competence: Some Relations Between Communicative Style and Attributions of Interpersonal Attractiveness and Effectiveness." Human Communication Research 5 (1979): 223 - 237.
- Breen, Paul, Donlon, Thomas F. and Whitaker, Urban, Teaching and Assessing Interpersonal Competence: A CAEL Handbook. Columbia, MD.: CAEL, 1977.
- Brein, Michael and David, Kenneth H., "Intercultural Communication and the Adjustment of the Sojourner." Psychological Bulletin 76 (1971): 215 - 230.
- Brembeck, Cole S. and Thompson, Timothy J., New Strategies For Educational Development. Lexington, Mass.: Lexington Books, D.C. Heath and Co., 1973.
- Bretsch, Howard S., "A Study of Intercultural Adjustment Problems of Missionary Children ." Journal of Educational Research 47 (1954): 609 - 611.
- Brett, Jeanne M., "The Effect of Job Transfer on Employees and Their Families." In Current Concerns in Occupational Stress, pp. 99 - 136. Edited by C. L. Cooper and R. Payne. New York: John Wiley & Sons Ltd., 1980.
- Brewer, Monroe, "Continuing Education: The Life-Long Learning Link." Evangelical Missions Quarterly 24 (1988): 278 - 284.
- Brewster, E. Thomas and Brewster, Elizabeth S., Language Acquisition Made Practical. Colorado Springs, CO: Lingua House, 1976.
- Brewster, E. Thomas and Brewster, Elizabeth S., Bonding and the Missionary Task. Pasadena, CA: Lingua House, 1980, 4th printing 1984.
- Brewster, E. Thomas and Brewster, Elizabeth S., Language Learning is Communication - Is Ministry. Pasadena, CA: Lingua House, 1984.
- Brislin, Richard W., Cross-Cultural Encounters: Face-to-Face Interaction. Elmsford, New York: Pergamon Press, 1981.

- Brislin, Richard W., "A Culture General Assimilator: Preparation for Various Types of Sojourns." International Journal of Intercultural Relations 10 (1986 ): 215 - 234.
- Brislin, Richard W., "The Establishment of Re-Entry/Transition Seminars for Overseas Sojourners," Academic Affairs Conference of Midwestern Universities. Racine, Wisconsin, 1974.
- Brislin, Richard W., "Methodological Points in Intercultural Communication Research," Society for Cross-Cultural Research . Philadelphia, Penn., 1973.
- Brislin, Richard W., "Orientation Programs for Cross-Cultural Preparation." In Perspectives on Cross-Cultural Psychology, pp. 287 - 305. Edited by Anthony J. Marsella, Roland G. Tharp and Thomas J. Ceborowski. New York: Academic, 1979.
- Brislin, Richard W., "Psychological Approaches to Removal of Crosscultural Misunderstandings and Misconceptions," Emerging Issues in Cultural Relations in an Interdependent World. 1976.
- Brislin, Richard W., "Research in Intercultural Training." In Handbook for Intercultural Trainers, pp. 3 - 15. Edited by David Reed Barker, Diane Zeller and Jacqueline Murray. Washington, D.C.: Foundations of Intercultural Training, SIETAR, 1980.
- Brislin, Richard W., Landis, Dan and Brandt, Mary E., "Conceptualizations of Intercultural Behavior and Training." In Handbook of Intercultural Training, pp. 1 - 35. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 1 - Issues in Theory in Design. New York: Pergamon Press, Inc. , 1983.
- Brislin, Richard W. and Pedersen, Paul, Cross-Cultural Orientation Programs. New York: Gardner Press, Inc., 1976.
- Britt, William Gordon, "Predicting Missionary Success Overseas Prior to Selection," Mental Health and Missions: A Second Conference. Angola, Indiana, 1981.
- Britt, William Gordon, III, "Pretraining Variables in the Prediction of Missionary Success Overseas." Journal of Psychology and Theology 11 (1983): 203 - 212.
- Broadus, Paul, "Family Structure as a Predictor of Missionary Readjustment." Pasadena, CA: Fuller Theological Seminary, 1981.
- Broom, Leonard and Kitsuse, John I., "The Validation of Acculturation: A Condition to Ethnic Assimilation." American Anthropologist 57 (1955): 44 - 48.
- Bruneau, Tom, "Conceptualizing and Using Empathy in Intercultural Contexts," Paper presented at the 17th Annual Convention of the Communication Association of Japan, Tokyo, 1987.
- Bruner, Jerome S., Goodnow, Jacqueline J. and Austin, George A., "Categories and Cognition." In Culture and Cognition: Rules, Maps, and Plans, pp. 168 - 190. Edited by James P. Spradley. San Francisco, CA.: Chandler Publishing Co., 1972.
- Bullock, F. W. B., A History of Training for the Ministry of the Church of England in England and Wales from 1800 to 1874. St. Leonards-on-the-Sea, 1963.
- Burgoon, Judee K., "Nonverbal Signals." In Handbook of Interpersonal Communication, pp. 344 - 390. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA: Sage Publishers, 1985.



- Burleson, Brant R., "Cognitive Complexity." In Personality and Interpersonal Communication, pp. 305 - 349. Edited by James C. McCroskey and John A. Daly. Sage Series in Interpersonal Communication, 6. Beverly Hills, CA.: Sage Publishing, 1987.
- Burusphat, Lertlak, "Some Problems Related to the Training Process." New York, NY: Communication Services, United Nations Development Support, 1977.
- Byrne, D., The Attraction Paradigm. New York: Academic Press, 1971.
- Byrne, D., "Interpersonal Attraction and Attitude Similarity." Journal of Personality and Social Psychology 62 (1961): 713-732.
- Cappella, Joseph N., "The Relevance of the Microstructure of Interaction to Relationship Change." Journal of Social and Personal Relationships 1 (1984): 239 - 264.
- Carver, C. S. and Scheier, M. F., "Control Theory: A Useful Conceptual Framework for Personality-Social, Clinical, and Health Psychology." Psychological Bulletin 92 (1982): 111-135.
- Casimir, Fred L., "Stereotypes and Schemata." In Communication, Culture, and Organizational Processes, pp. 48 - 67. Edited by William P. Gudykunst, Lea P. Stewart and Stella Ting-Toomey. International and Intercultural Communication Annual, 9. Beverly Hills, CA: Sage Publishing, 1985.
- Casse, Pierre, Training for the Cross-Cultural Mind: A Handbook for Cross-Cultural Trainers and Consultants. Washington, D. C.: SIETAR, 1879, 1981.
- Cegala, Donald J., "Interaction Involvement: A Cognitive Dimension of Communicative Competence." Communication Education 30 (1981): 109 - 121.
- Cegala, Donald J., Savage, Grant T., Brunner, Claire C. and Conrad, Anne B., "An Elaboration of the Meaning of Interaction Involvement: Toward the Development of a Theoretical Concept." Communication Monographs 49 (1982): 229 - 248.
- Chaffee, Clarence C., Problems in Effective Cross-Cultural Interaction. Columbus, Ohio: Battelle Memorial Institute, 1971.
- Chatterjee, Bishwa B., ed., Some Learning Theory Implications for Culture Learning. Honolulu: East-West Center, University of Hawaii, 1971 February.
- Chester, Ray M., "Stress on Missionary Families Living in 'Other Culture' Situations." Journal of Psychology and Christianity 2 (1983): 30-37.
- Cheung, Fanny M. and Culha, Meral U., "A Correspondence Model of Cross-Cultural Adjustment." Unpublished mimeographed manuscript from Hoopes collection, now part of the Bennett Collection, Portland, Oregon, n.d.
- Christensen, Dana, Farina, Amerigo and Boudreau, Louis, "Sensitivity to Nonverbal Cues as a Function of Social Competence." Journal of Nonverbal Behavior 4 (1980): 146 - 156.
- Christian and Missionary Alliance Division of Overseas Ministries (DOM), Attrition of Candidates and Missionaries in the Christian and Missionary Alliance, 1973-1983. Nyack, New York: Christian and Missionary Alliance, December 1984.
- Church, Austin T., "Sojourner Adjustment." Psychological Bulletin 91 (1982): 540 - 572.

- Clark, Ruth Anne and Delia, Jesse G., "Topoi and Rhetorical Competence." The Quarterly Journal of Speech 65 (1979): 187 - 206.
- Clement, Donald A. and Frandsen, Kenneth D., "On Conceptual and Empirical Treatments of Feedback in Human Communication ." In Interpersonal Communication: A Relational Perspective, pp. 372 - 383. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co. , 1980.
- Cleveland, Harlan, Mangone, Gerard and Adams, John Clarke, The Overseas American. New York: McGraw-Hill Book Company, Inc., 1960.
- Cochrane, Raymond and Sobol, Michael, "Life Stresses and Psychological Consequences." In The Social Psychology of Psychological Problems, pp. 152 - 182. Edited by Philip Feldman and Jim Orford. Chichester, England: John Wiley & Sons, 1980.
- Cody, Michael J. and McLaughlin, Margaret L., "The Situation as a Construct in Interpersonal Communication Research ." In Handbook of Interpersonal Communication, pp. 263 - 312. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA: Sage Publishing, 1985.
- Cohen, Andrew, "Successful Second-Language Speakers: A Review of Research Literature." Balshanut Shimushit. The Journal of the Israel Association 1 (1977): 3-21.
- Cohen, Erik, "Expatriate Communities." Current Sociology 24 (1977): 1 - 133.
- Cole, Michael, "An Ethnographic Psychology of Cognition." In Cross-Cultural Perspectives on Learning, pp. 157 - 175. Edited by Richard W. Brislin, Stephen Bochner and Walter J. Lonner. New York: Halstead Press Division, John Wiley and Sons, 1975.
- Collier, Mary Jane, "Cultural and Intercultural Communication Competence: Current Approaches and Directions for Future Research." International Journal of Intercultural Relations 13 (1989): 287 - 301.
- Collier, Mary Jane, "Culture and Gender: Effects of Assertive Behavior and Communication Competence." In Communication Yearbook 9, pp. 576-592. Edited by Margaret L. McLaughlin. Beverly Hills, CA: Sage Publishers, 1988.
- Condon, John C. and Yousef, Fathi S., An Introduction to Intercultural Communication. Indianapolis, IN: The Bobbs-Merrill Company, Inc., 1975.
- Conference on Missions Held in 1860 at Liverpool. London: James Nesbet and Co., 1860.
- Connolly, Kevin and Bruner, Jerome, "Competence: Its Nature and Nurture." In The Growth of Competence, pp. 3 - 7. Edited by Kevin Connolly and Jerome Bruner. London: Academic Press, 1974.
- Conway, Michael A., "Reducing Expatriate Failure Rates." Personnel Administrator (1984): 31 - 38.
- Cook, Mark, "Self-Perception, Perception of Others, and Social Personality." In Psychological Problems: The Social Context, pp. 97 - 122. Edited by P. Feldman and J. Orford. New York: John Wiley, 1980.



- Cooley, Ralph E., "Codes and Contexts: An Argument for Their Description." In Intercultural Communication Theory, pp. 241 - 251. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA: Sage Publishing, 1983.
- Cooley, Ralph E. and Roach, Deborah A., "A Conceptual Framework." In Competence in Communication: A Multi-Disciplinary Approach, pp. 11 - 32. Edited by Robert N. Bastrom. Beverly Hills, CA: Sage Publishing, 1984.
- Cooper, C.L. and Marshall, J., "Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Ill Health." Journal of Occupational Psychology 49 (1976): 11 - 45.
- Cooper, C. L., "Identifying Stressors at Work: Research Paper Developments." Journal of Psychosomatic Research 369 (1983): 369 - 380.
- Cooper, C.L. and Marshall, J., "Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Ill Health." Journal of Occupational Psychology 49 (1976): 11 - 33.
- Cort, Douglas A. and King, Michael, "Some Correlates of Culture Shock Among American Tourists in Africa." International Journal of Intercultural Relations 3 (1979): 211 - 225.
- Cotton, J. W., "Par for the Corps: A Review of the Literature on Selection, Training, and Performance of Peace Corps Volunteers." ERIC: ED 110672, 1975.
- Covell, Katherine and Turnbull, William, "The Long-Term Effects of Father Absence in Childhood on Male University Students' Sex-role Identity and Personal Adjustment ." The Journal of Genetic Psychology 141 (1982): 271 - 276.
- Craw, Donald L., "A Study of Basic Problems of Missionary Children With Proposed Solutions." M.A. Thesis, Talbot Theological Seminary, 1968.
- Cronen, Vernon E. and Shuter, Robert, "Forming Intercultural Bonds." In Intercultural Communication Theory, pp. 89 - 118. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA: Sage Publishing, 1983.
- Crow, Roger De, Cross-Cultural Interaction Skills: A Digest of Recent Training Literature, ERIC Clearinghouse, ED 029159, 1969.
- Cupach, William R. and Spitzberg, Brian H., "Trait Versus State: A Comparison of Dispositional and Situational Measures of Interpersonal Communication Competence." The Western Journal of Speech Communication 47 (1983): 364 - 379.
- Cureton, Charles B., "A Comparative Study of the Antecedents to Successful Pastoring and Missionary Service," Paper presented at the 3rd Conference on Mental Health and Missions. Angola, Indiana, 1982.
- Cureton, Charles B., "Missionary Fit: A Criterion-Related Model." Journal of Psychology and Theology 11 (1983): 196 - 202.
- D'Andrea, Vincent J., "Mental Health Training for Overseas Volunteer Service ," Paper presented at the 72nd Annual Convention of the American Psychological Association. Los Angeles, CA., 1964.

- Daly, John A., "Personality and Interpersonal Communication: Issues and Directions." In Personality and Interpersonal Communication, pp. 13 - 41. Edited by James C. McCroskey and John A. Daly. Sage Series in Interpersonal Communication, 6. Beverly Hills, CA.: Sage Publishing, 1987.
- Dana, Richard H., "Culturally Diverse Groups and MMPI Interpretation: An Etic and Emic Heuristic," Paper presented at the 22nd Annual Symposium on Recent Developments in the Use of the MMPI. Seattle, Washington, 1987.
- Danielian, Jack and Stewart, Edward C., "New Perspectives in Training and Assessment of Overseas Personnel," Paper presented at the Counterinsurgency Research and Development Symposium. Arlington, VA., 1966.
- David, Kenneth H., "Culture Shock and the Development of Self-Awareness." Journal of Contemporary Psychotherapy 4 (1971): 44 - 48.
- David, Kenneth H., "Intercultural Adjustment and Application of Reinforcement Theory to Problems of 'Culture Shock'." Trends 4 (1972).
- Davidson, Andrew R., "Cognitive Differentiation and Culture Training." In Cross-Cultural Perspectives on Learning, pp. 79 - 91. Edited by Richard W. Brislin, Stephen Bochner and Walter J. Lonner. New York: Halstead Press Division, John Wiley and Sons, 1975.
- Dayton, Edward R. and Fraser, David A., Planning Strategies for World Evangelization. Grand Rapids, MI: William B. Eerdmans Publishing Company, 1980.
- Desjeux, Dominique, "Development as an Acculturation Process." Development: Seeds of Change 3 (1981): 33 - 38.
- Detweiler, Richard A., "Culture, Category Width, and Attributions: A Model-Building Approach to the Reasons for Cultural Effects." Journal of Cross-Cultural Psychology 9 (1978): 259 - 284.
- Detweiler, Richard A., "Intercultural Interaction and the Categorization Process: A Conceptual Analysis and Behavioral Outcome." International Journal of Intercultural Relations 4 (1980): 275 - 293.
- Detweiler, Richard A., Brislin, Richard W. and McCormack, William, "Situational Analysis." In Handbook of Intercultural Training. Vol. 2 - Issues in Training Methodology, pp. 100 - 123. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, New York: Pergamon Press, 1983.
- Deutsch, Francine and Madle, Ronald A., "Empathy: Historic and Current Conceptualizations, Measurement, and a Cognitive Theoretical Perspective." Human Development 18 (1975): 267 - 287.
- Diamond, C. T. Patrick, "Understanding Others: Kellyian Theory, Methodology and Application." International Journal of Intercultural Relations 6 (1982): 395 - 420.
- Dicken, Charles, "Predicting the Success of Peace Corps Community Development Workers." Journal of Consulting and Clinical Psychology 33 (1969): 597-606.
- Dillon, David E., "Personality Characteristics of Evangelical Missionaries as Measured by the MMPI." Journal of Psychology and Theology 11 (1983): 213 - 217.



- Dinges, Norman, "Intercultural Competence." In Handbook of Intercultural Training, Vol. 1 - Issues in Theory and Design, pp. 176 - 201. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, New York: Pergamon Press, Inc., 1983.
- Dinges, Norman and Duffy, Lorraine, "Culture and Competence." In Perspectives on Cross-Cultural Psychology. Edited by Anthony J. Marsella, Roland G. Tharp and Thomas Ciborowski. New York: Academic Press, 1979.
- Dohrenwend, Bruce P. and Smith, Robert J., "Toward a Theory of Acculturation." Southwestern Journal of Anthropology 18 (1962): 30-39.
- Dinges, Norman G. and Lieberman, Devorah A., "Intercultural Communication Competence: Coping with Stressful Work Situations." International Journal of Intercultural Relations 13 (1989): 371 - 385.
- Dodd, Carley and Garmon, Cecile, "The Measurement of Personal Report of World View as a Cognitive Communication Variable," Paper presented at the Conference of The Speech Communication Association . Denver, Colorado, 1987.
- Doll, Edgar, The Measurement of Social Competence: A Manual for the Vineland Social Maturity Scale. New York: Educational Building, 1953.
- Donovan, K., "The Concept of Stress and Its Effect on the Quality of Missionary Life." Paper presented at a Conference of the Asia Pacific Christian Mission, 1984, June.
- Donovan, K., "Stress and Missionary Life." Tokyo: General Council of Asia Pacific Christian Mission, 1984.
- Donovan, K., "The Special Needs of Single Missionaries," General Executive Conference. 1984.
- Douglas, Mary. "Cultural Bias," in In The Active Voice. London: Routledge and Kegan Paul, 1982.
- Draguns, Juris G., "On Culture Shock, Biculturalism, and Cultural Complexity." The Pennsylvania State University, mimeographed paper, n.d.
- Draper, Perry L., "Evaluating Candidates for Missionary Service," Paper presented at the 1st annual Conference on Christian Missions and Mental Health. Pokagon State Park, Angola, Indiana, 1980.
- Driskell, Gerald and Dodd, Carley H., "Communication Style, Personal World View, and Opinion Leadership in a Closed Culture," Paper presented at the Conference of The Speech Communication Association. New Orleans, 1988.
- Dueck, Al, "American Psychology in Cross-Cultural Context ." Journal of Psychology and Theology 11 (1983): 172 - 180.
- Dunn, Frederica Hoge, "The 'Best Man' Theory and Why it Fails," The New York Times, July 16, 1978.
- Dye, Sally Folger, "Decreasing Fatigue and Illness in Field Work." Missiology 2 (January 1974): 79-109.
- Dye, Wayne T., "Stress-Producing Factors in Cultural Adjustment." Missiology 2 (January 1974): 61-77.

- Eagle, Robert L., "Positive Possibilities of Mid-Life Transitions." Evangelical Missions Quarterly 20 (1984): 38-47.
- Eckblad, Tom, "Tips for Urban Church Planters." Urban Mission 1 (1984): 24-29.
- Ecumenical Missionary Conference on Foreign Missions. Held in Carnegie Hall and Neighboring Churches. April 21-May 1, 1900. New York: American Tract Society, 1900.
- Edwards, Linda, "Present Shock, and How to Avoid it Abroad." The Bridge 2 (1978): 32.
- Ehrenhaus, Peter, "Culture and the Attribution Process." In Intercultural Communication Theory, pp. 259 - 270. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA.: Sage Publishing, 1983.
- Elias, Dean and David, Paul, "A Guide to Problem Solving." In The 1983 Annual for Facilitators, Trainers, and Consultants, pp. 149 - 156. Edited by University Associates, 1983.
- Elkins, Phil, "Preparation: Pay The Price." In Helping Missionaries Grow: Readings in Mental Health and Missions, pp. 109-117. Edited by Kelly S. O'Donnell and Michèle Lewis O'Donnell. Pasadena, CA: William Carey Library, 1988.
- Ellingsworth, Huber W., "Adaptive Intercultural Communication." In InterCultural Communication Theory, pp. 195 - 204. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA: Sage Publishing, 1983.
- Elliston, Edgar J., "Designing Leadership Education." Missiology: An International Review 16 (1988): 202-208.
- Ensworth, George, "An Assessment Package for Missionaries," Paper presented at the 2nd Conference on Mental Health and Missions. Angola, Indiana, 1981.
- Ensworth, George, "Ecclesiogenic Illness of the Missionary," Paper presented at the 4th Conference on Mental Health and Missions. Angola, Indiana, 1983.
- Ensworth, George, "Pressures on Marriage in Missionary Service: Some Possible Responses," Paper presented at the 1st Conference on Christian Missions and Mental Health. Angola, Indiana, 1980.
- Evangelism, The Lausanne Committee for World, "The Willowbank Report." In Perspectives on the World Christian Movement: A Reader, pp. 520-522. Edited by Ralph D. Winter and Stephen C. Hawthorne. Pasadena, CA: William Carey Library, 1981.
- Farley, Gordon K. and Werkman, Sidney, "Overseas Fathers: Vulnerabilities and Treatment Strategies." In The Father's Role: Applied Perspectives, pp. 277 - 292. Edited by Michael E. Lamb. New York: John Wiley & Sons, Inc., 1986.
- Feldman, Daniel S. Jr., Gagnon, Jim, Hofmann, Rich and Simpson, Joe, Statview II. Berkeley, CA: Abacus Concepts, Inc., 1986.
- Ferguson, Larry N., Kliwer, Dean, Lindquist, Stanley E., Williams, Donald E. and Heinrich, Robert P., "Candidate Selection Criteria: A Survey." Journal of Psychology and Theology 11 (1983): 243 - 250.



- Ferris, Robert W., "The Emphasis on Leadership as Servanthood: Analysis of curriculum Commitments." Ph.D. Dissertation, Michigan State University, 1982.
- Fiedler, Fred E., Mitchell, Terence and Triandis, Harry C., "The Culture Assimilator: An Approach to Cross-Cultural Training." Journal of Applied Psychology 55 (1971): 95 - 102.
- Fiedler, Fred E., O'Brien, Gordon E. and Ilgen, Daniel R., "The Effect of Leadership Style Upon the Performance and Adjustment of Volunteer Teams Operating in Stressful Foreign Environment." Human Relations 22 (1969): 503 - 514.
- Fink, Clinton F., "Some Conceptual Difficulties in the Theory of Social Conflict." The Journal of Conflict Resolution 12 (1968): 412 - 460.
- Fisher, B., Giblin, P. and Regan, S., "Healthy Family Functioning/Goals of Family Therapy II: An Assessment of What Therapists Say and Do." The American Journal of Family Therapy 11 (1983): 42-48.
- Fisher, Ron, "Why Don't We Have More Church-Planting Missionaries?" Evangelical Missions Quarterly 14 (1978): 205-211.
- Fitchen, Richard, "Observing Intercultural Communication: A Proposal of Theory and Method." International Journal of Intercultural Relations 3 (1979): 163 - 173.
- Fleming, Bruce C. E., Contextualization of Theology. Pasadena, California: William Carey Library, 1980.
- Fontaine, Gary, "Roles of Social Support Systems in Overseas Relocation: Implications for Intercultural Training." International Journal of Intercultural Relations 10 (1986): 361 - 378.
- Foote, Nelson N. and Cottrell, Jr., Leonard L., Identity and Interpersonal Competence. Chicago, IL.: University of Chicago Press, 1955.
- Ford, Margaret L., "Improved Interpersonal Cross-Cultural Communications." The Bridge (1979): 20, 44.
- Forgas, Joseph P., "Episode Cognition and Personality: A Multidimensional Analysis." Journal of Personality 51 (1983): 34 - 48.
- Foster, Robert John, "Dimensions of Training for Overseas Assignment ." Washington, D.C.: George Washington University , 1969.
- Fowler, Sandra Mumford, Hopkins, Robbins and Silberstein, Fanchon, "The Optimal Family: Eight Variables Leading to Intercultural Success," SIETAR/International. San Antonio, 1985.
- Foyle, Marjory F., "Stress Related Problems," Paper presented at the Evangelical Missionary Alliance Conference on the Mental Health of Missionaries. London, England, 1984.
- Foyle, Marjory, "Evangelical Missionary Alliance Conference on the Mental Health of Missionaries," London, England, 1984.
- Foyle, Marjory, "Missionary Stress and What to do About it." Evangelical Missions Quarterly (1985): 32 - 40.
- Foyle, Marjorie, "Overcoming Stress." Evangelical Missions Quarterly (1985): 134 - 142.

Foyle, Marjory, "How to Choose the Right Missionary." Evangelical Missions Quarterly (1986): 196 - 204.

Frake, Charles O., "The Ethnographic Study of Cognitive Systems." In Culture and Cognition: Rules, Maps, and Plans, pp. 191 - 205. Edited by James P. Spradley. San Francisco, CA: Chandler Publishing Company, 1972.

Fraser, Gordon, "A Survey of First Term Missionary Casualties." Bibliotheca Sacra 115 (1958): 44-49.

Fretz, Roger, Hunter, William and Strauss, Gary, "A Relational-Interactional Approach to Missionary Adjustment through Psychodrama," Paper presented at the 6th Conference on Mental Health and Missions. Pokagon State Park, Angola, Indiana, 1985.

Frizen, Jr., Edwin L., "Executives Tell Mission Profs What They Think." Evangelical Mission Quarterly 8 (1972): pp.143-146.

Furnham, Adrian, "The Adjustment of Sojourners." In Cross-Cultural Adaptation, Current Approaches, pp. 42 - 61. Edited by Young Yun Kim and William B. Gudykunst. International and Intercultural Communication Annual, 11. Beverly Hills, CA. : Sage Publishing , 1987.

Furnham, Adrian and Bochner, Stephen, "Social Difficulty in a Foreign Culture: An Empirical Analysis of Culture Shock." In Cultures in Contact, pp. 161 - 198. Edited by Stephen Bochner. International Series in Experimental Social Psychology, 1. Oxford: Pergaman Press, 1982.

Gairdner, W.H.T., Edinburgh 1910: An Account and Interpretation of the World Missionary Conference. London: Oliphant, Anderson and Ferrier, 1910.

Gardiner, Gareth S., "Complexity Training and Prejudice Reduction." Journal of Applied Social Psychology 2 (1972): 326 - 342.

Gardner, George H., "Intercultural Communication: Some Observations on the Dynamics of Encounter," Paper presented at the New York State Conference on Intercultural Communication. SUNY at Binghamton, New York, 1974, May 10-12.

Gardner, Laura Mae, "A Case Study Examination of Missionary Terminations." D.Min. Dissertation, Conservative Baptist Seminary, 1984.

Gardner, Laura Mae, "Preventive Care of Missionary Personnel in Today's World: Conclusions and Recommendations Drawn from a Case Study Examination of Missionary Terminations," Paper presented at the 5th Conference on Mental Health and Missions. Angola, Indiana, 1984.

Gardner, Laura Mae, "A Practical Approach to Transitions in Missionary Living." Journal of Psychology and Theology 15 (1987): 342 - 349.

Gardner, Laura Mae, "Proactive Care of Missionary Personnel." Journal of Psychology and Theology 15 (1987): 308 - 314.

Gardner, Laura Mae, "Transitions in the Life of a Wycliffe Worker," Paper presented at the 7th Conference on Mental Health and Missions. Pokagon State Park, Angola, Indiana, 1986.

Gartner, Alan, The Preparation of Human Service Professionals. New York: Human Sciences Press, 1976.



- Gilbert, Shirley J., "Empirical and Theoretical Extensions of Self-Disclosure." In Interpersonal Communication: A Relational Perspective, pp. 336 - 347. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co., 1980.
- Giles, Howard and Richard L. Street, Jr. , "Communicator Characteristics and Behavior." In Handbook of Interpersonal Communication, pp. 205 - 261. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA.: Sage Publishing, 1985.
- Gish, Dorothy, "Sources of Missionary Stress." Journal of Psychology and Theology 11 (1983): 236 - 242.
- Gish, Glen, "Clarification: A Missing Skill." Peace Corps Program and Training Journal 11 (1974): 28 - 29.
- Glenn, Edmund S., "Meaning and Behavior: Communication and Culture." In Intercultural Communication: A Reader, pp. 123 - 141. Edited by Larry A. Samovar and Richard E. Porter. Belmont, CA: Wadsworth Publishing Company, Inc., 1973.
- Glenn, Edmund S., "The Theory of Meaning and Some Cognitive Considerations for the Analysis of Differences Between Cultures." Communication & Cognition 7 (1974): 407 - 436.
- Gochenour, Theodore and Janeway, Anne, "Seven Concepts in Cross-Cultural Interaction: A Training Design." 1973.
- Goldberg, Lewis R., "Selection on the Rocks: Three Years of Peace Corps Assessment in Hawaii." Unpublished paper, Washington, D.C.: Office of Peace Corps, n.d.
- Goldfried, M. R. and D'Zurilla, T., "A Behavioral-Analytic Model for Assessing Competence." In Current Topics in Clinical and Community Psychology, pp. 151-196. Edited by C. D. Spielberger. Cambridge, Massachusetts: Harvard University Press, 1969.
- Gradin, Dwight, "A Design for Cross-Cultural Orientation." Evangelical Missions Emissary 11 (1980): 1 - 6.
- Greenway, Roger, "Practical Skills Needed by Christian Missionaries," Paper presented at the IFMA-EFMA Personnel Committee Workshop, Farmington, Michigan, December 1982.
- Grove, Cornelius Lee, "Improving Intercultural Learning Through the Orientation of Sojourners." Occasional Papers in Intercultural Learning (1982): 1 - 16.
- Grove, Cornelius Lee and Torbiorn, Ingemar, "A New Conceptualization of Intercultural Adjustment and the Goals of Training." International Journal of Intercultural Relations 9 (1985): 205 - 233.
- Gudykunst, William B., "Toward a Theoretical Framework for the Study of Intercultural Communication," Paper presented at the Speech Communication Association Convention. Washington, D.C., 1977.
- Gudykunst, William B. and Hammer, Mitchell R., "Basic Training Design Approaches to Intercultural Training." In Handbook of Intercultural Training, pp. 118 - 154. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, Vol. 1 Issues in Theory and Design. New York: Pergamon Press, Inc., 1983.

- Gudykunst, William B. and Hammer, Mitchell R., "Strangers and Hosts: An Uncertainty Reduction Based Theory of Intercultural Adaptation." In Cross-Cultural Adaptation, Current Approaches, pp. 106 - 139. Edited by Young Yun Kim and William B. Gudykunst. Beverly Hills, CA: Sage Publishing, 1987.
- Gudykunst, William B., Hammer, Mitchell R. and Wiseman, Richard L., "An Analysis of an Integrated Approach to Cross-Cultural Training." International Journal of Intercultural Relations 1 (1977): 99 - 110.
- Gudykunst, William B. and Loy, Pamela H., "Attitude-Behavior Consistency: An Exploratory Examination of the Cultural Influence," Paper presented at the International Communication Association Annual Convention. Philadelphia, Pa. , 1979.
- Gudykunst, William B. and Nishida, Tsukasa, "The Influence of Cultural Variability on Perceptions of Communication Behavior Associated with Relationship Terms ." Human Communication Research 13 (1986): 147 - 166.
- Gudykunst, William B., Wiseman, Richard L. and Hammer, Mitchell, "Determinants of the Sojourner's Attitudinal Satisfaction: A Path Model." In Communication Yearbook I, pp. 415 - 425. Edited by B. D. Ruben. New Brunswick, NJ: Transaction, 1977.
- Gullahorn, Jeanne E. and Gullahorn, John T., "American Students Abroad: Professional versus Personal Development ." The Annals of the American Academy of Political and Social Science 368 (1966): 43 - 59.
- Gullahorn, John T. and Gullahorn, Jeanne E., "An Extension of the U-Curve Hypothesis." Journal of Social Issues 19 (1963): 33 - 47.
- Gumperz, John J., "Individual and Social Differences in Language Use." In Individual Differences in Language Ability and Language Behavior, pp. 1 - 31. Edited by W. Wang and C. Fillmore. New York: Academic Press, 1978.
- Gumperz, John J., "Language, Communication, and Public Negotiation." In Anthropology and the Public Interest, pp. 273 - 292. Edited by Peggy Sanday. New York: Academic Press, 1976.
- Gumperz, John J., "Sociocultural Knowledge in Conversational Inference," 28th Annual Round Table Monograph Series on Languages and Linguistics. Georgetown University, 1978.
- Guptara, Prabhu, "Searching the Organization for the Cross-Cultural Operators." International Management 41 (1986): 40 - 42.
- Guthrie, George M. and Zektick, Ida N., "Predicting Performance in the Peace Corps." The Journal of Social Psychology 71 (1967): 11 - 21.
- Guthrie, George M., "A Behavioral Analysis of Culture Learning." In Cross-Cultural Perspectives on Learning, pp. 96-108. Edited by Richard W. Brislin, Stephen Bochner and Walter J. Lonner. New York: Holstead Press Division, John Wiley and Sons, 1975.
- Haan, Norma, "Changes in Young Adults After Peace Corps Experiences: Political-Social Views, Moral Reasoning, and Perceptions of Self and Parents." Journal of Youth and Adolescence 3 (1974): 177 - 194.
- Habenicht, Donna J., "The College Student as Short-term Overseas Missionary: Before, During and After," Paper presented at the Christian Association for Psychological Studies. San Diego, 1981.



- Haigh, Gerard, "Field Training in Human Relations for the Peace Corps." Journal of Social Psychology 68 (1966): 3 - 13.
- Hale, Claudia L., "Cognitive Complexity-Simplicity as a Determinant of Communication Effectiveness." Communication Monographs 47 (1980): 304 - 311.
- Hale, Claudia L. and Delia, Jesse G., "Cognitive Complexity and Social Perspective-Taking." Communication Monographs 43 (1976): 195 - 203.
- Hall, Edward T., Beyond Culture. Garden City, NY: Anchor, 1977.
- Hall, Edward T., The Hidden Dimension: Man's Use of Space in Public and Private. London: Bodley Head, 1966.
- Hall, Edward T., The Silent Language. New York: Fawcett, 1959.
- Hall, Edward T. and Hall, Elizabeth, "How Cultures Collide." Psychology Today (1976): 66 - 74, 97.
- Hallowell, A. Irving, "Sociopsychological Aspects of Acculturation." In The Service of Man in the World Crisis, pp. 171 - 200. Edited by Ralph Linton. New York: Columbia University Press, 1945.
- Hallowell, A. Irving, Culture and Experience. Philadelphia, PA: University of Pennsylvania Press, 1955.
- Hammer, Mitchell R., "Behavioral Dimensions of Intercultural Effectiveness: A Replication and Extension." International Journal of Intercultural Relations 11 (1987): 65 - 88.
- Hammer, Mitchell R., "The Effects of an Intercultural Communication Workshop on Participants' Intercultural Communication Competence: An Exploratory Study." Communication Quarterly 32 (1984): 252 - 262.
- Hammer, Mitchell R., "Intercultural Communication Competence." In The Handbook of International and Intercultural Communication, pp. 247 - 260. Edited by M. K. Asante and William B. Gudykunst. Newbury Park, CA: Sage, 1989.
- Hammer, Mitchell R., "Intercultural Communication Skills." Sietar Communiqué 21 (Dec.1991-Jan.1992): 6, 15.
- Hammer, Mitchell R., Gudykunst, William B. and Wiseman, Richard L., "Dimensions of Intercultural Effectiveness: An Exploratory Study." International Journal of Intercultural Relations 2 (1978): 382 - 392.
- Hannigan, Terence P., "Traits, Attitudes, and Skills That Are Related To Intercultural Effectiveness And Their Implications For Cross-Cultural Training: A Review of the Literature." International Journal of Intercultural Relations 14 (1990): 89 - 111.
- Hanscombe, Craig, "Predicting Missionary Dropout." Evangelical Missions Quarterly 15 (July 1979): 152-157.
- Harris, Jesse G., Jr., "A Science of the South Pacific: Analysis of the Character Structure of the Peace Corps Volunteer." American Psychologist 28 (1973): 232-247.
- Harris, Jesse G., Jr., "Identification of Cross-Cultural Talent: The Empirical Approach of the Peace Corps." In Culture Learning: Concepts, Applications, and Research, pp. 182 - 193. Edited by Richard W. Brislin. Honolulu, Hawaii: University Press of Hawaii, 1977.

- Harris, Philip R. and Harris, Dorothy L., "Preventing Culture Shock." The Bridge (1976): 16, 37-40.
- Harrison, Roger and Hopkins, Richard L., "The Design of Cross-cultural Training: An Alternative to the University Model." The Journal of Applied Behavioral Science 3 (1967):
- Hawes, Frank, "Adapting the Assessment Centre Method as a Procedure in the Selection of Cooperants For Assignment Overseas." Ottawa, Ontario, Canada: Canadian International Development Agency, 1977.
- Hawes, Frank, "Validating the Selection Weekend Method in the Assessment of Candidates for Overseas Assignment." Ottawa, Ontario, Canada: Canadian International Development Agency, 1977.
- Hawes, Frank and Kealey, Daniel J., Canadians in Development: An Empirical Study of Adaptation and Effectiveness on Overseas Assignment. Ottawa, Ontario: Canadian International Development Agency (CIDA), 1979.
- Hawes, Frank and Kealey, Daniel J., "An Empirical Study of Canadian Technical Assistance: Adaptation and Effectiveness on Overseas Assignment." International Journal of Intercultural Relations 7 (1981): 239 - 258.
- Hays, Richard D., "Expatriate Selection: Insuring Success and Avoiding Failure." Journal of International Business Studies 5 (1974): 25 - 37.
- Hazleton, Vincent, Jr. and Cupach, William R., "An Exploration of Ontological Knowledge: Communication Competence as a Function of the Ability to Describe, Predict, and Explain." The Western Journal of Speech Communications 50 (1986): 119 - 132.
- Heath, Douglas H., Maturity and Competence. New York: Gardner Press, Inc., 1977.
- Hecht, Kathryn A., "Challenging Evaluation to the Cross-Cultural Test: Program Evaluation in Cross-Cultural Settings." International Journal of Intercultural Relations 3 (1979): 315 - 325.
- Hecht, Michael L., "Ethnic Communication : A Comparative Analysis of Satisfying Communication." International Journal of Intercultural Relations 8 (1984): 135 - 151.
- Heider, Fritz, The Psychology of Interpersonal Relations. New York: John Wiley, 1958.
- Heider, Fritz, "Social Perception and Phenomenal Causality." Psychological Review 51 (1944): 358-374.
- Heinzen, Archer Dodson, "Pre-Departure Training for Wives...In-country." The Bridge (1981): 41 - 43.
- Herskovits, Melville J., Acculturation: The Study of Culture Contact. Gloucester, Mass.: Peter Smith, 1958.
- Hesselgrave, David J., Communicating Christ Cross-culturally. Grand Rapids, Mich.: Zondervan Publishing House, 1978.
- Hesselgrave, David J. and Rommen, Edward, Contextualization: Meanings, Methods, and Models. Grand Rapids, Michigan: Baker Book House, 1989.



- Hiebert, Frances F., "How My Understanding of Mission Has Developed." Mission Focus 16 (1988): 32- 34.
- Higginbotham, Howard N., "Cultural Issues in Providing Psychological Services for Foreign Students in the United States." International Journal of Intercultural Relations 3 (1979): 49 - 85.
- Hill, Harriet, "Incarnational Ministry: A Critical Examination." Evangelical Missions Quarterly 26 (1990): 196-201.
- Hill, Peter C., "Assessing the Needs of Missionaries: A Follow-up Study." Nyack, NY: The Christian and Missionary Alliance, Division of Overseas Ministries, 1986.
- Hill, Peter C., "Final Report: Assessing the Needs of Missionaries." Nyack, NY: The Christian and Missionary Alliance, Division of Overseas Ministries, 1984.
- Hinchliff, Peter, "The Selection and Training of Missionaries in the Early Nineteenth Century." In The Mission of the Church and the Propagation of the Faith, pp. by G. J. Cuming. Studies in Church History, 6. Cambridge: Cambridge University Printing House, 1970.
- Hirsch, B.J., "Natural Support Systems and Coping with Major Life Changes." American Journal of Psychology 8 (1980): 159-172.
- Hofstede, Geert, "Cultural Differences in Teaching and Learning." International Journal of Intercultural Relations 10 (1986): 301 - 320.
- Hofstede, Geert, "The Cultural Relativity of the Quality of Life Concept." Academy of Management Review 9 (1984): 389 - 398.
- Hofstede, Geert, Culture's Consequences. Beverly Hills, CA: Sage Publications, Inc., 1984.
- Hofstede, Geert, "Motivation, Leadership, and Organization: Do American Theories Apply Abroad?" Organizational Dynamics (1980): 42 - 63.
- Hogg, W. Richey, "Missionary Conferences." In The Concise Dictionary of the Christian World Mission, pp. 131-133. Edited by Stephen Neill, Gerald H. Anderson and John Goodwin. London: United Society for Christian Literature, 1971.
- Hollowell, A. Irving, "Sociopsychological Aspects of Acculturation." In The Service of Man in the World Crisis, pp. 171-200. Edited by Ralph Linton. New York: Columbia University Press, 1945.
- Hoopes, David S., "Intercultural Communication Concepts and the Psychology of Intercultural Experience." In Multicultural Education, pp. 10 - 38. Edited by Margaret D. Pusch. Intercultural Press, Inc. , 1981.
- Hoopes, David S. and Althen, Gary L., "Culture and Communication in Intercultural Relations." In Intercultural Communication: A Reader, pp. 37 - 52. Edited by Larry S. Samovar and Richard E. Porter. Belmont, CA. : Wadsworth, 1976.
- Hoopes, David S. and Pusch, Margaret D., "Definition of Terms." In Multicultural Education, pp. 2 - 8. Edited by Margaret Pusch. Chicago, Ill.: Intercultural Network, Inc., 1981.
- Hoopes, David S. and Ventura, Paul, Intercultural Sourcebook: Cross-Cultural Training Methodologies. La Grange, Illinois: Society for Intercultural Education, Research, and Training (SIETAR), 1979.

- Hopkins, Robbins Sankey, "Defining And Predicting Overseas Effectiveness for Adolescent Exchange Students." D. Ed. Dissertation, University of Massachusetts, 1982.
- Howard, Cecil G., "Model for the Design of a Selection Program for Multinational Executives." Public Personnel Management (1974): 138-145.
- Howard, Cecil G., "How Relocation Abroad Affects Expatriates' Family Life." Personnel Administrator (1980): 71 - 78.
- Hunter, W. F., "A Survey of Psychological Evaluation Programs in the Selection of Overseas Missionary Candidates." M.A. Thesis, Golden Gate Baptist Theological Seminary, 1965.
- Hurt, H. Thomas, "Communication Competence for Teachers." In Competence in Communication : A Multi-Disciplinary Approach, pp. 151 - 173. Edited by Robert N. Bastrom. Beverly Hills, CA: Sage Publishing, 1984.
- Hymes, D., "Competence and Performance in Linguistic Theory." In Language Acquisition: Models and Methods, pp. 3 - 26. Edited by Renina Huxley and Elizabeth Ingram. New York: Academic Press, 1971.
- Hymes, D., Foundations in Sociolinguistics: An Ethnographic Approach. Philadelphia, PA: University of Pennsylvania Press, 1974.
- Imahori, T. Todd and Lanigan, Mary L., "Relational Model of Intercultural Communication Competence." International Journal of Intercultural Relations 13 (1989): 269 - 286.
- Iwasko, Ronald A., "An Integrated Program for Training First-term Missionaries of the Assemblies of God." D.Miss. Dissertation, Trinity Evangelical Divinity School, 1984.
- Iwasko, Ronald A., "A Personnel Director Speaks to Professors of Mission," Evangelical Missions Society. New Orleans, 1990.
- Janis, Irving L. and Robin, Judith, "Attribution, Control, and Decision Making: Social Psychology and Health Care." In Health Psychology - A Handbook, pp. 487 - 521. Edited by George C. Stone, et al. San Francisco, CA.: Jossey-Bass Publishing, 1979.
- Jensen, J. Vernon, "Perspective on Nonverbal Intercultural Communication." In Intercultural Communication: A Reader, pp. 256 - 272. Edited by Larry A. Samovar and Richard Porter. Wadsworth, Inc., 1985.
- Ji, Won Yong, "Mission in the 21st Century: A New Ball Game!," Paper presented at the Annual Convention of American Association of Bible Colleges. St. Louis, Missouri, 1990.
- Johnson, C. B. and Penner, David R., "The Current Status of the Provision of Psychological Services in Missionary Agencies in North America." Christian Association for Psychological Studies Bulletin 7 (1981): 25 - 27.
- Johnson, Elizabeth, "Cultural Awareness." The Corporate Expatriate (1987): 20 - 21.
- Johnston, James, ed., Report of the Centenary Conference on The Protestant Missions of the World. London: James Nisbet and Co., 1888.



- Johnston, LeRoy N., "Understanding the Family Needs of Cross-Cultural Workers ," Paper presented at the Mental Health and Missions Study Group. Ventnor, N. J., December, 1984.
- Johnston, Mary Boppell, "Problems Encountered by Peace Corps Volunteers and Missionaries in Asia." Unpublished paper. Portland, Oregon, n.d.
- Johnston, Mary Boppell, "Training Needs of Americans Working Abroad." Social Change Ideas & Applications 2 (1972): 1 - 3.
- Johnston, Mary Boppell, "Training Needs of Overseas Americans." Social Change Ideas & Applications 3 (1973): 1 - 3.
- Jones, E.E. and Nesbitt, R. E., "Actor and the Observer: Divergent Perceptions of the Causes of Behavior." In Attribution: Perceiving the Causes of Behavior, pp. 80-102. Edited by E. E. Jones, et al. Morristown, NJ: General Learning Press, 1972.
- Jones, R. and Popper, R., "Characteristics of Peace Corps Host Countries and the Behavior of Volunteers." Journal of Cross-Cultural Psychology 3 (September 1972): 233-245.
- Jones, Stella B., "Geographic Mobility as Seen by the Wife and Mother." Journal of Marriage and the Family (1973): 210 - 218.
- Jutzi, Pearl, "Mobility: Implications for the Spouse." M.A. Thesis, Trinity College, 1986.
- Kane, Herbert J., Winds of Change in the Christian Mission. Chicago: Moody Press, 1973.
- Kane, J. Herbert, The Making of a Missionary. Grand Rapids, MI: Baker Book House, 1975.
- Kasdorf, Hans, "Mission Future: Issues We Face." Mission Focus 16 (1988): 65 - 100.
- Kaslow, Florence W., "On the Nature of Empathy." Intellect (1977): 273 - 277.
- Kayser, John G., "Developing the Missions Curriculum," Paper presented at the Conference of the Association of Canadian Bible Colleges, Three Hills, 1984.
- Kayser, John G., "The Implications of Non-Formal Education on Cross-Cultural Ministry Training," Paper written for the Sixth Non-Formal Education Institute, Michigan State University, Lansing, Michigan, May 1985.
- Kealey, Daniel J., "A Study of Cross-Cultural Effectiveness: Theoretical Issues, Practical Applications." International Journal of Intercultural Relations 13 (1989): 387 - 427.
- Kealey, Daniel, "Adaptation to a New Environment." Ottawa, Ontario: Canadian International Development Agency, n.d.
- Kealey, Daniel J. and Ruben, Brent D., "Cross-Cultural Personnel Selection Criteria, Issues, and Methods." In Handbook of Intercultural Training, pp. 155 - 175. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 1, Issues in Theory and Design. New York: Pergamon Press, Inc., 1983.
- Keefe, Susan Emley, "Acculturation and the Extended Family Among Urban Mexican Americans." In Acculturation: Theory, Models, and Some New Findings, pp. 85 - 110. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.

- Keefe, Thomas, "Empathy: The Critical Skill." In Interpersonal Communication: A Relational Perspective, pp. 384 - 389. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co., 1980.
- Kelley, Harold H., "Attribution Theory in Social Psychology." In Nebraska Symposium on Motivation, pp. 192 - 238. Edited by David Levine. Current Theory & Research on Motivation, 15. Omaha, Nebraska: University of Nebraska Press, 1967.
- Kelly, George A., The Psychology of Personal Constructs. New York: W.W. Norton and Co, 1955.
- Kennedy, Pattye Weaver and Dreger, Ralph Mason, "Development of Criterion Measures of Overseas Missionary Performance." Journal of Applied Psychology 59 (1974): 69 - 73.
- Kidder, Louise H., "The Inadvertent Creation of a Neocolonial Culture: A Study of Western Sojourners in India." International Journal of Intercultural Relations 1 (1977): 48 - 60.
- Killilea, M., Mutual Help Organizations: Interpretations in the Literature. New York: Grune and Stratton, 1976.
- Kim, Young Yun, "Communication Patterns of Foreign Immigrants in the Process of Acculturation." Human Communication Research 4 (1977): 66 - 77.
- Kim, Young Yun, "Toward an Interactive Theory of Communication-Acculturation." In Communication Yearbook III, pp. 435-453. Edited by Brent D. Ruben. III. New Brunswick, NJ: Transaction International Communication Association, 1979.
- Kinsler, F. Ross, "Extend the Seminaries." In Theological Education by Extension, pp. Edited by Ralph Winter. South Pasadena, CA.: William Carey Library, 1969.
- Kleinjans, Everett, "On Culture Learning." Honolulu: East-West Culture Learning Institute, 1972.
- Klemp, G. O., "Identifying, Measuring, and Integrating Competence." In New Directions in Experiential Learning: DEfining and Measuring Competence, pp. 41-52. Edited by P. Pottinger and J. Goldsmith. 3. San Fransisco, CA: Jossey-Bass, 1979.
- Knapper, Christorpher and Cropley, Arthur, Lifelong Learning and Higher Education. London: Croom Helm, 1985.
- Knowles, Malcolm, The Modern Practice of Adult Education. New York: Association Press, 1970.
- Koester, Jolene and Olebe, Margaret, "The Behavioral Assessment Scale for Intercultural Communication Effectiveness." International Journal of Intercultural Relations 12 (1988): 233-246.
- Koester, Jolene and Olebe, Margaret, "The Measurement of Intercultural Communication Effectiveness: An Extension of Ruben's Behavioral Assessment Scales," Paper presented to the International and Intercultural Communication Division, Speech Communication Association Annual Meeting. Chicago, Illinois, 1986.
- Kohls, L. Robert, "Four Traditional Approaches to Developing Cross-cultural Preparedness in Adults: Education, Training, Orientation, and Briefing." International Journal of Intercultural Relations 11 (1987): 89 - 106.



- Kohls, L. Robert, "Intercultural Training." In Human Resources Management and Development Handbook, pp. 1125 - 1134. Edited by William R. Tracey. New York City: American Management Associations, 1985.
- Kohls, L. Robert, "Models for Comparing and Contrasting Cultures," Paper presented at The National Association for Foreign Student Affairs Conference. Washington, D.C., 1987.
- Kohls, L. Robert, ed., Training Know-How For Cross-Cultural Trainers. Washington, D. C.: Washington International Center of Meridian House International, 1985.
- Kohls, Robert, Intercultural Training: Don't Leave Home Without It. Washington, D.C.: SIETAR, 1984.
- Korzenny, Felipe and Griffis, Betty Ann, "Education in Intercultural Training." In Handbook for Intercultural Trainers, pp. 1 - 68. Edited by David Reed Barker, Diane Zeller and Jacqueline Murray. Foundations of Intercultural Training, Washington, D.C.: SIETAR, 1980.
- Kraemer, Hendrick, The Communication of the Christian Faith. Philadelphia, PA: Westminster Press, 1956.
- Kroeber, A. L. and Kluckhohn, Clyde, Culture: A Critical Review of Concepts and Definitions. New York: Random House, A Vintage Book, 1952.
- Kruckeberg, J. and Stafford, A., "The Missionary's Need of Family Life Training." Evangelical Missions Quarterly 17 (1981): 163-170.
- Labarre, Weston, "The Cultural Basis of Emotions and Gestures." Journal of Personality 16 (1947): 51 - 68.
- LaBelle, Thomas J., "Formal, Nonformal, and Informal Education: A Holistic Perspective on Lifelong Learning." International Review of Education 28 (1982): 160-172.
- Ladd, Gary W. and Mize, Jacquelyn, "A Cognitive-Social Learning Model of Social-Skill Training." Psychological Review 90 (1983): 127 - 157.
- Lagrone, Don M., "The Military Family Syndrome." American Journal of Psychiatry 135 (1978): 1040 - 1043.
- Lapp, John A., "Global Mission in the 1990s." Mission Focus 17 (1989): 73 - 76.
- Lazaras, Richard S. and Launier, Raymond, "Stress-Related Transactions between Person and Environment." In Perspectives in Interactional Psychology, pp. 287 - 327. Edited by L. A. Pervin and M. Lewis. New York: Plenum Press, 1978.
- Leach, Wesley B. and Owens, Vyrle W., "Training and the Change Agent Role Model." Training and Development Journal (1973): 40 - 47.
- Lepperd, John R., ed., On the Nature of Cross-Cultural Interaction and Communication: Concepts, Models, Theories. Unpublished mimeographed paper, August 1971.
- LeRoy N. Johnston, Jr. , "Building Relationships Between Mental Health Specialists and Mission Agencies," Paper presented at the 4th Conference on Mental Health and Missions. Angola, Indiana, 1983.
- Lindquist, Brent, "Misuses of Psychological Assessment with Missionaries." Journal of Psychology and Christianity 2 (1983): 17 - 23.

- Lindquist, Stanley E., "Hopelessness and Depression: A Cognitive Remedial Approach." Journal of Psychology and Christianity 5 (1986): 66 - 69.
- Lingenfelter, Sherwood, Transforming Culture. Grand Rapids, Michigan: Baker Book House, 1992.
- Lingenfelter, Sherwood G. and Mayers, Marvin K., Ministering Cross-Culturally. Grand Rapids, Mich.: Baker Book House, 1986.
- Linton, Ralph, Acculturation in Seven American Indian Tribes. New York: Appleton-Century, 1940.
- Locke, Susan A. and Feinsod, Fred M., "Psychological Preparation for Young Adults Traveling Abroad." Adolescence 17 (1982): 815 - 819.
- Loewen, Jacob A., "Roles: Relating to an Alien Social Structure." Missiology 4 (1976): 217-219.
- Loewen, Jacob A. and Loewen, Anne, "The "Missionary" Role." In Culture and Human Values: Christian Intervention in Anthropological Perspective, pp. 428-443. Edited by William A. Smalley. The William Carey Library Series on Applied Cultural Anthropology, South Pasadena, CA: William Carey Library, 1975, 2nd ed. 1977.
- Loewen, Jacob A. and Loewen, Anne, "Role, Self-Image and Missionary Communication." In Culture and Human Values: Christian Intervention in Anthropological Perspective, pp. 412-427. Edited by William A. Smalley. The William Carey Library Series on Applied Cultural Anthropology, South Pasadena, CA: William Carey Library, 1975, 2nd ed. 1977.
- Logan, R.D., "Bridging the Traditional and Non-Traditional: A Model for Higher Education." Liberal Education 69 (1983): 233-243.
- Lonner, Walter J., "The Use of Western-Based Tests in Cross-Cultural Counseling," Paper presented to the Division 9 Symposium, Cross-cultural Counselling, American Psychological Association. Montreal, Quebec, 1973.
- Loss, Myron, "The Missionary's First Term: Crisis in Self-Esteem." M.A. Thesis, Columbia Graduate School of Bible and Missions, 1982.
- Luchins, Abraham S., "Experimental Attempts to Minimize the Impact of First Impressions." In The Order of Presentation in Persuasion, pp. 62 - 75. Edited by Carl I. Hovland, et al. Binghamton, N.Y.: Vail-Ballou Press, Inc., 1957.
- Luchins, Abraham S., "Primacy-Recency in Impression Formation." In The Order of Presentation in Persuasion, pp. 33 - 61. Edited by Carl I. Hovland, et al. Binghamton, N.Y.: Vail-Ballou Press, Inc., 1957.
- Lundquist, Teryl Lee, "Facilitating the Learning of How to Learn: The Development of Active, Resourceful, and Responsible Learners in an Experiential, Cross-Cultural Academic Program." M.A. Thesis, School for International Training, 1981.
- Lundstedt, Sven, "An Introduction to Some Evolving Problems in Cross-Cultural Research." Journal of Social Issues 14 (1963): 1 - 9.
- Lustig, Myron W. and King, Stephen W., "The Effect of Communication Apprehension and Situation on Communication Strategy Choices." Human Communication Research 7 (1980): 74 - 82.



- Lynton, Ernest A., "Acceptability of Field Experience in Traditional Institutions ." In New Directions for Higher Education: Implementing Field Experience Education, pp. 95 - 101. Edited by San Francisco, CA.: Jossey-Bass, 1974.
- Macdonald, Fergus, Word Evangelism. Edinburgh, Scotland: Handsel Press and Rutherford House, 1990.
- "Make Jesus King" The Report of the International Student's Missionary Conference. Liverpool, January 1-5, 1896. London: The Student Volunteer Missionary Union, 1896.
- Malone, Mary, "Relieving the Stress of the Corporate Transfer 'Double Whammy'," Financial Post, May 12, 1984, p. 22.
- Mansell, Maureen, "Transcultural Experience and Expressive Response." Communication Education 30 (1981): 93 - 108.
- Marriott, Barbara, "Managing Culture Shock: Beating the Blues in an Overseas PCS." LadyCom: The Military Lifestyle Magazine, May 1983, pp. 80 - 81, 86.
- Martin, Judith N., "Training Issues in Cross-Cultural Orientation." International Journal of Intercultural Relations 10 (1986): 103 - 116.
- Martin, Judith N. and Hammer, Mitchell R., "Behavioral Categories of Intercultural Communication Competence: Everyday Communicators' Perceptions." International Journal of Intercultural Relations 13 (1989): 303 - 332.
- Marvin, Alvin, The Means of World Evangelization: Missiological Education. S. Pasadena, CA: William Carey Library, 1974.
- Mayfield, E. C., "The Selection Interview--A Reevaluation of Published Research." Personnel Psychology 17 (1964): 239-260.
- McCaffery, James A., "Independent Effectiveness: A Reconsideration of Cross-Cultural Orientation and Training." International Journal of Intercultural Relations 10 (1986): 159 - 178.
- McCroskey, James C., "Communication Competence, the Elusive Construct." In Competence in Communication: A Multi-Disciplinary Approach, pp. 259 - 268. Edited by Robert N. Bastrom. Beverly Hills, CA: Sage Publishers Inc., 1984.
- McCroskey, James C. and Richmond, Virginia P., "Willingness to Communicate." In Personality and Interpersonal Communication, pp. 129 - 156. Edited by James C. McCroskey and John A. Daly. Sage Series in Interpersonal Communication, 6. Beverly Hills, CA.: Sage Publishing, 1987.
- McCubbin, Hamilton I. and Dahl, Barbara B., "Prolonged Family Separation in the Military: A Longitudinal Study." In Families in the Military System, pp. 112 - 144. Edited by Hamilton I. McCubbin, Barbara B. Dahl and Edna J. Hunter. Beverly Hills, CA: Sage Publishing, 1976.
- McFall, Richard M., "A Review and Reformulation of the Concept of Social Skills." Behavioral Assessment 4 (1982): 1 - 33.
- McFee, Malcolm, "The 150% Man: A Product of Blackfeet Acculturation." American Anthropologist 70 (1968): 1096 - 1107.
- McGavran, Donald A., Effective Evangelism: A Theological Mandate. Phillipsburg, NJ: Presbyterian and Reformed Publishing Company, 1988.

- McGuire, Michael and McDermott, Steven, "Communication in Assimilation, Deviance, and Alienation States." In Cross-Cultural Adaptation: Current Approaches, pp. 90 - 105. Edited by Young Yun Kim and William B. Gudykunst. International and Intercultural Communication Annual, 11. Beverly Hills, CA: Sage Publishing, 1987.
- McKee, Timothy Gene, "A Formative Evaluation of a Church of Christ Missiological Rural Training Program in El Peten, Guatemala," 2 Volumes. D. Ed. Dissertation, Pepperdine University, 1981.
- McKinney, Lois, "Contextualizing Instruction: Contributions to Missiology from the Field of Education," Paper presented at the Third Consultation on Theology and Mission. Deerfield, Illinois, 1982.
- McKinney, Lois, "Theological Education Overseas: A Church-Centered Approach," EFMA Convention. Orlando, Florida, 1979.
- McLaughlin, Margaret L., Cody, Michael J. and Robey, Carl S., "Situational Influences on the Selection of Strategies to Resist Compliance-Gaining Attempts." Human Communication Research 7 (1980): 14 - 36.
- Meech, David, "Reactions to Loss and Displacement in Wycliffe Personnel." Counseling Department, Wycliffe Bible Translators, Inc., n.d.
- Meichenbaum, Donald, Butler, Lynda and Gruson, Linda, "Toward a Conceptual Model of Social Competence." In Social Competence, pp. 36 - 60. Edited by Jeri Dawn Wine and Marti Diane Smye. New York: Guilford Press, 1981.
- Mendenhall, Mark, Oddou, Gary, Stimpson, David V. and Jackson, Dennis, "Enhancing Trainee Satisfaction with Cross-Cultural Training Programs Via Prior Warning." International Journal of Intercultural Relations 6 (1982): 369 - 379.
- Menninger, W. Walter and English, Joseph T., "Psychiatric Casualties from Overseas Peace Corps Service." Journal of Social Issues (1963): 148 - 158.
- Mestenhauser, Josef A. and Paige, R. Michael, "Cross-Cultural Training for Development: Concepts, Issues and Ideas." Minneapolis, MN: University of Minnesota, 1983.
- Metzger, Janet, "Toward a Phenomenology of Acculturation: An Investigation of Foreign Students' Perception of Competency Along Phenomenological Dimensions of Acculturation by Means of Guttman's Scalogram Analysis." M.A. Thesis, Portland State University, 1977.
- Metzger, Janet G., "A Field Study of Five Teams of Change Agents: An Evaluation of Training Results," Tenth Conference of the Society for Intercultural Education, Training and Research, International Conference (SIETAR). Washington, D. C., 1984.
- Metzger, Janet G., "Narration as a Construct for Understanding Third-Culture Building: Exploring Missionaries' Success and Effectiveness as Cosmological Change Agents." Ph. D. Dissertation, University of Southern California, 1987.
- Meyer, John R., Elia, Michael and Satloff, Jo, ed., Managing Human Resources: Productivity, Quality of Work Life, and Profits. New York: McGraw-Hill, Inc., 1986.
- Miller, Edwin L., "The International Selection Decision: A Study of Some Dimensions of Managerial Behavior in the Selection Decision Process." Academy of Management Journal 16 (1973): 241 - 252.



- Miller, Eric J., ed., Some Reflections on the Role of the Diplomatic Wife. London: The Tavistock Institute of Human Relations, July 1977.
- Miller, Gerald, Boster, Frank, Roloff, Michael and Seibold, David, "Compliance-Gaining Message Strategies: A Typology and Some Findings Concerning Effects of Situational Differences." Communication Monographs 44 (1977): 37 - 51.
- Miller, Gerald R., "The Current Status of Theory and Research in Interpersonal Communication." In Interpersonal Communication: A Relational Perspective, pp. 17 - 31. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN. : Burgess Publishing Co. , 1980.
- Miller, Robert F., "Where Do You Come From?" Foreign Service Journal (1974): 21 - 22, 28.
- Miller, Sue Ann, "An Investigation of Predeparture Training Activities of Selected Midwestern American Multinational Corporations." D. Ed. Dissertation, Purdue University, 1988.
- Mischel, Walter, "Predicting the Success of Peace Corps Volunteers in Nigeria." Journal of Personality and Social Psychology 1 (1965): 510 - 517.
- Montalvo, Frank Flores, "Family Separation in the Army: A Study of the Problems Encountered and the Caretaking Resources Used by Career Army Families Undergoing Military Separation." In Families in the Military System, pp. 147 - 173. Edited by Hamilton I. McCubbin, Barbara B. Dahl and Edna J. Hunter. Beverly Hills, CA: Sage Publishing, 1976.
- Morgan, R. G. T., "Analysis of Social Skills: The Behaviour Analysis Approach." In The Analysis of Social Skill, pp. 103 - 130. Edited by W.T. Singleton, P. Spurgeon and R. B. Stammers. New York: Plenum Press, 1980.
- Morrill, Don R., "Debriefing the Missionary Family." Lansing, MI: Michigan State University, 1980.
- Motamedi, Kurt Kourosh, "Adaptability and Copability: A Study of Social Systems, Their Environment, and Survival." Group & Organization Studies 2 (1977): 480 - 490.
- Mullens, Joseph, Conference on Missions Held in 1860 at Liverpool. London: James Nesbet and Co., 1860.
- Mumford, Sandra J., "Overseas Adjustment as Measured by a Mixed Measurement Scale," Paper presented at The Meeting of the Western Psychological Association. Sacramento, CA, 1975.
- Myklebust, Olav Guttorm, The Study of Missions in Theological Education. Oslo: Forlaget Land Og Kirke, 1957.
- Naiman, N., Fröhlich, M. and Stern, H. H., The Good Language Learner. Toronto, Ontario: Modern Language Center, Ontario Institute for Studies in Education, 1975.
- Naiman, N., Fröhlich, M. and Todesco, A., "The Good Second Language Learner." TESL Talk 6 (1975): 58-76.
- Naremore, Rita C., "The Learning of Communication Roles and Norms." In Developing Communication Competence in Children, pp. 20 - 27. Edited by R. R. Allen and Kenneth L. Brown. Skokie, IL.: National Textbook Company, 1976.

- Naroll, Raoul, "A Tentative Index of Culture-Stress." International Journal of Social Psychiatry 5 (1959): 107 - 116.
- Nash, Dennison and Schaw, Louis C., "Personality and Adaptation in an Overseas Enclave." Human Organization 21 (1963): 252 - 263.
- Neill, Stephen, A History of Christian Mission. Harmondsworth, Middlesex: Pelican Books, 1964.
- Neisser, U., Cognition and Reality: Principles and Implications of Cognitive Psychology. San Fransisco: W.H. Freeman, 1976.
- Nelson, Terrill Rudell, "Critical Cross-cultural Adjustment Skills Needed by Overseas Missionary Personnel: A Preliminary Study of Missionary Preservice Training Programs." Ph. D. Dissertation, New York University, 1985.
- Newman, Jerry, Bhatt, Bhal and Gutteridge, Thomas, "Determinants of Expatriate Effectiveness: A Theoretical and Empirical Vacuum." Academy of Management Review (1978): 655 - 661.
- Nikelly, Arthur, "Cultural Conflict and Related Mental Health Problems," Paper presented at the International Communication Association Conference. New Orleans, 1974.
- Nishida, Hiroko, "Japanese Intercultural Communication Competence and Cross-Cultural Adjustment." International Journal of Intercultural Relations 9 (1985): 247 - 269.
- Niyekawa-Howard, Agnes M., ed., Biculturalism and Cognitive Growth: Theoretical Foundations for Basic and Applied Research. Honolulu, HI: East-West Center , 1970 July .
- Norton, Monica Laurie, "The Effects of Communication Effectiveness and Cognitive Compelexity on Culture Shock." M.A. Thesis, Abilene Christian University, 1984.
- Norton, Monica Laurie and Dodd, Carley H., "The Relationship of Self-Report Communication Effectiveness to Culture Shock," Paper presented at the Conference of The SCA Intercultural Communicaiton Division. Chicago, Illinois, 1984.
- Nouwen, H. J., Intimacy. Notre Dame, Indiana: Fides Publishers Inc., 1969.
- O'Donnell, Kelly S., "Developmental Tasks in the Life Cycle of Mission Families." Journal of Psychology and Theology 15 (1987): 281 - 290.
- O'Donnell, Kelly S., "Some Suggested Ethical Guidelines for the Delivery of Mental Health Services in Mission Settings." In Helping Missionaries Grow: Readings in Mental Health and Missions, pp. 466-479. Edited by Kelly S. O'Donnell and Michèle Lewis O'Donnell. Pasadena, CA: William Carey Library, 1988.
- O'Keefe, Barbara J. and Delia, Jesse G., "Impression Formation and Message Production." In Social Cognition and Communication, pp. 33 - 72. Edited by Michael F. Roloff and Charles R. Berger. Beverly Hills, CA: Sage Publishing, 1982.
- Oberg, K., "Cultural Shock: Adjustment to new cultural environments." Cultural Anthropology 7 (1960): 177-182.
- Olebe, Margaret and Koester, Jolene, "Exploring the Cross-Cultural Equivalence of the Behavioral Assessment Scale for Intercultural Communication." International Journal of Intercultural Relations 13 (1989): 333 - 347.



- Olmedo, Esteban L., "Acculturation: A Psychometric Perspective." American Psychologist 34 (1979): 1061 - 1070.
- Olmedo, Esteban L., "Quantitative Models of Acculturation: An Overview." In Acculturation: Theory, Models, and Some New Findings, pp. 27 - 45. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.
- Padilla, Amado M., "The Role of Cultural Awareness and Ethnic Loyalty in Acculturation." In Acculturation: Theory, Models, and Some New Findings, pp. 47 - 84. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.
- Paige, R. Michael, "Trainer Competencies: The Missing Conceptual Link in Orientation." International Journal of Intercultural Relations 10 (1986): 135 - 158.
- Paige, R. Michael and Martin, Judith N., "Ethical Issues and Ethics in Cross-Cultural Training." In Handbook of Intercultural Training, pp. 36 - 60. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 1 Issues in Theory and Design. New York: Pergamon Press, Inc., 1983.
- Parks, Malcolm R., "Interpersonal Communication and the Quest for Personal Competence." In Handbook of Interpersonal Communication, pp. 171 - 201. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA.: Sage Publishing, 1985.
- Pearce, W. Barnett, "Trust in Interpersonal Communication." In Interpersonal Communication: A Relational Perspective, pp. 356 - 363. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co., 1980.
- Pearce, W. Barnett, Cronan, Vernal E. and Conklin, F., "On What to Look at When Analyzing Communication: A Hierarchical Model of Actor's Meanings." Communication 4 (1979): 195-220.
- Pearce, W. Barnett and Cronen, Vernon E., Communication Action and Meaning: The Creation of Social Realities. New York: Praeger Publishers, 1980.
- Pearce, W. Barnett and Wiseman, Richard L., "Rules Theories: Varieties, Limitations, and Potentials." In Intercultural Communication Theory, pp. 79 - 88. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA.: Sage Publishing, 1983.
- Pearson, Richard E., "Issues and Procedures in the Assessment of Social Support: Cross Cultural Perspectives," SIETAR. Montreal, 1987.
- Pearson, Robert P., "Measuring Adjustment and Attitude Change." In New Directions For Experiential Learning: Cross-Cultural Learning, pp. 21 - 29. Edited by Charles B. Neff. 11. Washington: Jossey-Bass Inc., 1981.
- Peers, Robert, Adult Education. London: Rutledge and Kegan Paul, 1972.
- Pendleton, David and Furnham, Adrian, "Skills: A Paradigm for Applied Social Psychological Research." In The Analysis of Social Skill, pp. 241 - 255. Edited by W.T. Singleton, P. Spurgeon and R. B. Stammers. New York: Plenum Press, 1980.
- Pesner, Jonathan W. and Auld, Frank, "The Relationship Between Bilingual Proficiency and Self-Esteem." International Journal of Intercultural Relations 4 (1980): 339 - 351.

- Peter, Hollis W. and Henry, Edwin R., "Steps to Better Selection and Training for Overseas Jobs." Personnel (1962): 18 - 25.
- Peters, George W., "Training Missionaries for Today's World." Evangelical Missions Quarterly 2 (1965): 19-28.
- Peterson, Virgil, "Measuring the Impact on the Volunteer." Synergist (1979): 14 - 19.
- Piggin, Stuart, "Making Evangelical Missionaries 1789-1858." In Evangelicals and Society from 1750, pp. 290-293. Edited by G. E. Duffield. Sutton Courtney Press, 1984.
- Plueddemann, James E., "Sub-Saharan Africa: A Praxis Theory of Intercultural Training." In Handbook of Intercultural Training, pp. 133 - 142. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 3 - Area Studies in Intercultural Training. New York: Pergamon Press, Inc. , 1983.
- Pollock, William, "A Theoretical Consideration of Selection for Training for Ministry." Journal of Psychology and Theology 14 (1986): 125 - 134.
- Powers, W. T., Behavior: The Control of Perception. Chicago: Aldine, 1979.
- Powers, William T. and Lowry, David N., "Basic Communication Fidelity: A Fundamental Approach." In Competence in Communication: A Multi-Disciplinary Approach, pp. 57 - 71. Edited by Robert N. Bastrom. Beverly Hills, CA: Sage Publishing, 1984.
- Preiswerk, Roy, "Cultural Identity, Self-Reliance, and Basic Needs." Development: Seeds of Change 3 (1981): 83 - 91.
- Priceman, Mark, "Inter-Cultural Competence and the American Businessman: A Challenge for Education and Training." Training Directors Journal (1965): 1 - 12.
- "Proceedings of the Union Missionary Convention Held in New York, May 4th and 5th, 1854," New York, 1854.
- "Proceedings of a General Conference of Bengal Protestant Missionaries, held in Calcutta, Sept. 1855," London, 1856.
- "Proceedings of the South India Missionary Conference, held at Ootacamund, April 1858," London, 1859.
- Prosser, Michael H., The Cultural Dialogue. Washingt, D.C.: SIETAR Int'l, 1985.
- Pruitt, D., "Definition of the Situation as a Determinant of International Action." In International Behavior: A Social-Psychological Analysis, pp. 395-412. Edited by K. Helm. New York: Holt, Rinehart, and Winston, 1965.
- Prutting, Carol A., "Pragmatics as Social Competence ." Journal of Speech and Hearing Disorders 47 (1982): 123 - 134.
- Pulatie, David, "How do You Ensure Success of Managers Going Abroad?" Training and Development Journal 39 (1985): 22 - 24.
- Randolph, Gary, Landis, Dan and Tzeng, Oliver C. S., "The Effects of Time and Practice Upon Culture Assimilator Training." International Journal of Intercultural Relations 1 (1977): 105 - 120.



- Ratiu, Indrei, "Cross-Cultural Adaptability and Learning," Paper presented at the 7th Annual Conference of the Society for Intercultural Education, Training and Research (SIETAR). Vancouver, British Columbia, 1981.
- Reapsome, Jim, "Ten Sure Steps to Success as a Missionary: An Evangelical Missions Quarterly Survey." Evangelical Missions Quarterly 10 (1989): 156 - 160.
- Redfield, Robert, Linton, Ralph and Herskovits, Melville J., "Memorandum for the Study of Acculturation." American Anthropologist 38 (1936): 149 - 152.
- Renwick, George W., Evaluation Handbook For Cross-Cultural Training and Multicultural Education. LaGrange, IL: Intercultural Network, Inc., 1979.
- Reyburn, William D., "Identification in the Missionary Task." In Perspectives on the World Christian Movement: A Reader, pp. 465-475. Edited by Ralph D. Winter and Stephen C. Hawthorne. Pasadena, CA: William Carey Library, 1981.
- Rohrlich, Beulah and Martin, Judith N., "Intercultural Communication and the Sojourn: Suggestions for Future Research," Paper presented at the Conference of the International Society for Intercultural Education. Montreal, Canada, 1987.
- Roloff, Michael E. and Berger, Charles R., "Thinking About Friends and Lovers: Social Cognition and Relational Trajectories." In Social Cognition and Communication, pp. 151 - 192. Edited by Michael E. Roloff and Charles R. Berger. Beverly Hills, CA.: Sage Publishing, 1982.
- Roloff, Michael E. and Kellermann, Kathy, "Judgments of Interpersonal Competence: How You Know, What You Know, and Who You Know." In Competence in Communication: A Multi-Disciplinary Approach, pp. 175 - 218. Edited by Robert N. Bastrom. Beverly Hills, CA: Sage Publishing, 1984.
- Roper, Cynthia Sue, "The Effects of Communication Apprehension World View, Innovativeness and Communicator Style on Culture Shock." M.A. Thesis, Abilene Christian University, 1986.
- Rosch, Eleanor, "Universals and Cultural Specifics in Human Categorization." In Cross-Cultural Perspectives on Learning, pp. 177 - 206. Edited by Richard W. Brislin, Stephen Bochner and Walter J. Lonner. New York: Halstead Press Division, John Wiley and Sons, 1975.
- Rosenberg, Seymour, "New Approaches to the Analysis of Personal Constructs in Person Perception." In Nebraska Symposium on Motivation, pp. 179 - 237. Edited by J. Cole, Omaha, Nebraska: University of Nebraska Press, 1976.
- Rossiter, Charles M., "Instruction in Metacommunication." In Interpersonal Communication: A Relational Perspective, pp. 396 - 401. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN: Burgess Publishing Company, 1980.
- Ruben, Brent D., "Assessing Communication Competency for Intercultural Adaptation." Group & Organization Studies 1 (1976): 334 - 354.
- Ruben, Brent D., "Guidelines for Cross-Cultural Communication Effectiveness." Group & Organization Studies 2 (1977): 470 - 479.
- Ruben, Brent D., "Human Communication and Cross-Cultural Effectiveness." Intercultural and International Communication Annual 4 (1978): 95 - 105. Also printed in Intercultural Communication: A Reader, pp. 338-346. Edited by Larry Samovar and R. Porter. Belmont, CA: Wadsworth, 1985.

- Ruben, Brent D., Human Communication and The Cross-Cultural Transfer of Skill: The Technical Advisor as Teacher: Readings in International Development and Cross-Cultural Adaptation, Ottawa, Ontario: Canadian International Development Agency, 1977.
- Ruben, Brent D., "The Study of Cross-Cultural Competence: Traditions and Contemporary Issues." International Journal of Intercultural Relations 13 (1989): 229 - 240.
- Ruben, Brent D., "A System-Theoretic View." In Intercultural Communication Theory, pp. 131 - 145. Edited by William B. Gudykunst. International and Intercultural Communication Annual, 7. Beverly Hills, CA: Sage Publishing, 1983.
- Ruben, Brent D., Askling, Lawrence R., and Kealey, Daniel J., "Cross-Cultural Effectiveness." In Overview of Intercultural Education, Training, and Research: Vol. 1--Theory, pp. 92 - 105. Edited by David Hoopes, Paul Pedersen and George Renwick. Washington, D.C.: Society for Intercultural Education, Training, and Research (SIETAR), 1977.
- Ruben, Brent D., Kealey, Daniel, and Askling, Lawrence R., "Factors in Personal Adaptation, Culture Shock, and Effectiveness in a Developing Country: A Descriptive Profile of the Canadian Technical Advisor and Family After One Year in Kenya," Paper presented at the Third Annual Conference of the Society for Intercultural Education, Training, and Research (SIETAR). Chicago, Illinois, 1977.
- Ruben, Brent D. and Kealey, Daniel J., "Behavioral Assessment of Communication Competency and the Prediction of Cross-Cultural Adaptation." International Journal of Intercultural Relations 3 (1979): 15 - 47.
- Rubin, Joan, "What the Good Language Learner Can Teach Us." TESOL Quarterly 9 (1975): 41-51.
- Rubin, Rebecca B., "The Development and Refinement of a Communication Competence Assessment Instrument," Paper presented at the Conference of the Speech Communication Association. Boston, 1981.
- Rubin, Rebecca B. and Henzl, Sally A., "Cognitive Complexity, Communication Competence, and Verbal Ability." Communication Quarterly 32 (1984): 263 - 270.
- Sandholtz, Kurt, "Executives' Spouses Face Tough Adjustments Overseas," National Business Employment Weekly, June 8, 1986, pp. 9 - 10.
- Sandler, Irwin N. and Ramsay, Thomas B., "Dimensional Analysis of Childrens' Stressful Life Events." American Journal of Community Psychology 8 (1980): 285 - 302.
- Sands, William A., "A Method for Evaluating Alternative Recruiting Selection Strategies." Journal of Applied Psychology 57 (1973): 222 - 227.
- Sarbaugh, L. E., "A Systematic Framework for Analyzing Intercultural Communication." In International and Intercultural Communication Annual, pp. 11 - 22. Edited by Nemi C. Jain. V. Beverly Hills, CA: Sage Publishing, 1979.
- Savage, Peter, "Four Crises in Third World Theological Education." Evangelical Missions Quarterly 9 (1972): 28-34.
- Sawyer, J., "Measurement and Prediction, Clinical and Statistical." Psychological Bulletin 66 (1966): 178-200.



- Schein, Edgar H., Professional Education. Berkeley, CA. : Carnegie Commission on Higher Education, 1972.
- Schein, E. and Bennis, W., Personal and Organizational Growth Through the Laboratory Method. New York: Wiley, 1965.
- Schild, Erling O., "The Foreign Student, as Stranger, Learning the Norms of the Host-Culture." Journal of Social Issues 18 (1962): 41 - 54.
- Schlenker, Barry R., Impression Management: The Self-Concept, Social Identity, and Interpersonal Relations. Monterey, CA.: Brooks/Cole Publishing Company, 1980.
- Schnapper, Melvin, "Culture Simulation as a Training Tool." International Development Review (1973): 3 - 5.
- Schneller, R., "Intercultural and Intrapersonal Processes and Factors of Misunderstanding: Implications for Multicultural Training." International Journal of Intercultural Relations 13 (1989): 465 - 484.
- Scott, William A., "Psychological and Social Correlates of International Images." In International Behavior: A Social-Psychological Analysis, pp. 71 - 103. Edited by Herbert C. Kelman. New York: Holt, Rinehart, and Winston, 1965.
- Scribner, Sylvia and Cole, Michael, "Cognitive Consequences of Formal and Informal Education." Science 182 (1973): 553 - 559.
- Seat, June and Copeland, Louise, "Summary of the Survey on the Role of the Missionary Wife." Japan Baptist Mission, 1978 November 15.
- Seelye, H. Ned, "An Objective Measure of Biculturation: Americans in Guatemala, a Case Study." In Americans Abroad: Two Studies in Second Culture Adjustment, pp. 1 - 11. Edited by H. Ned Seelye. La Grange, Illinois: International Resource Development Inc., 1979.
- Seelye, H. Ned and Brewer, Marilyn B., "Ethnocentrism and Acculturation of North Americans in Guatemala." In Americans Abroad: Two Studies in Second Culture Adjustment, pp. 12 - 17. Edited by H. Ned Seelye. La Grange, Illinois: International Resource Development, Inc., 1979.
- Seeman, M., "On the Meaning of Alienation." American Sociological Review 24 (1959): 783-791.
- Seibold, David R., Cantrill, James G. and Meyers, Renee A., "Communication and Interpersonal Influence." In Handbook of Interpersonal Communication, pp. 551 - 611. Edited by Mark L. Knapp and Gerald R. Miller. Beverly Hills, CA.: Sage Publishing, 1985.
- Shapiro, George L., Pratt, Jerie M. and Schall, Maryan, "The Eclectic Perspective on Interpersonal Communication: An Explanation and a Description." Communication Education 30 (1981): 133 - 145.
- Shatz, Marilyn, "The Relationship Between Cognitive Processes and the Development of Communication Skills." In Nebraska Symposium On Motivation, pp. 1 - 42. Edited by Charles Blake Keasey. 25. 1977.
- Sikkema, Mildred and Niyekawa-Howard, Agnes M., Cross-Cultural Learning and Self-Growth: Getting to Know Ourselves and Others. Honolulu, HI: University of Hawaii, School of Social Work, 1977.

- Sillars, Alan L., "Attribution and Communication." In Social Cognition and Communication, pp. 73 - 106. Edited by Michael E. Roloff and Charles R. Berger. Beverly Hills, CA.: Sage Publishing, 1982.
- Simpkins, Tom, Non-formal Education and Development. Manchester, England: The University of Manchester, 1977.
- Simpson, David Stewart, "A Philosophy of Missiological Education." D.Miss. Dissertation, Fuller Theological Seminary, 1978.
- Simpson, Donald T., "A Model for Training Design: Selecting Appropriate Methods." In The 1983 Annual for Facilitators, Trainers, and Consultants, pp. 223 - 230. Edited by San Diego, CA: University Associates, 1983.
- Singer, Marshall R., "Culture: A Perceptual Approach." In Intercultural Communication: A Reader, pp. 110 - 119. Edited by Larry Samovar and Richard Porter. Belmont: Wadsworth Publishing Co. , 1976.
- Siu, Paul C. P., "The Sojourner." The American Journal of Sociology 58 (1952): 34 - 44.
- Skarsten, Stan and Morehouse, Marian, "Critical Factors in Missionary Assessment and Placement," Paper presented at the 2nd Conference on Mental Health and Missions. Pokagon State Park, Angola, Indiana, 1981.
- Smalley, William A., "Culture Shock, Language Shock, and the Shock of Self-Discovery." Practical Anthropology 10 (1963): 49-56.
- Smalley, William A., "Emotional Storm Signals--The Shocks of Culture, Language, Self-Discovery." Evangelical Missions Quarterly 2 (1966): 518-529.
- Smith, Donald E., "The Christian Life Assessment Scales: Christian Self-Perception." Journal of Psychology and Christianity 5 (1986): 46 - 61.
- Smith, M. Brewster, "Explorations in Competence: A Study of Peace Corps Teachers in Ghana." American Psychologist 21 (1966): 555-566.
- Smith, M. Brewster, "Competence and Socialization." In Socialization and Society, pp. 270 - 320. Edited by John A. Clausen. Boston, MA.: Little, Brown, & Co., 1968.
- Smith, M. Brewster, Fawcett, James T., Ezekiel, Raphael and Roth, Susan, "A Factorial Study of Morale Among Peace Corps Teachers in Ghana." Journal of Social Issues 19 (1963): 10 - 32.
- Snodgrass, Lenny L. and Zachlod, Craig E., "American Expatriates Abroad." The Bridge, Winter 1977-78, pp. 14 - 15.
- Snyder, Mark, "Self-Monitoring of Expressive Behavior." Journal of Personality and Social Psychology 30 (1974): 528-540.
- Spindler, Louise and Spindler, George, "Male and Female Adaptations in Culture Change." American Anthropologist 60 (1958): 217 - 233.
- Spitzberg, Brian H., "Issues in the Development of a Theory of Interpersonal Competence in the Intercultural Context." International Journal of Intercultural Relations 13 (1989): 241 - 268.
- Spitzberg, Brian H. and Cupach, William R., Handbook of Interpersonal Competence Research. New York: Springer-Verlag, 1989.



Spitzberg, Brian H. and Cupach, William R., Interpersonal Communication Competence. Beverly Hills, CA: Sage Publications, 1984.

Spradley, James P. and Phillips, Mark, "Culture and Stress: A Quantitative Analysis." American Anthropologist 74 (1972): 518 - 529.

Stein, Morris I., "Predicting Volunteer Effectiveness." In Volunteers for Peace, pp. 165 - 200. Edited by Morris I. Stein, New York, N.Y.: John Wiley & Sons, Inc., 1966.

Steinfatt, Thomas M., "Personality and Communication: Classical Approaches." In Personality and Interpersonal Communication, pp. 42 - 125. Edited by James C. McCroskey and John . Daly. Sage Series in Interpersonal Communication, 6. Beverly Hills, CA.: Sage Publishing, 1987.

Stening, Bruce W., "Problems in Cross-Cultural Contact: A Literature Review." International Journal of Intercultural Relations 3 (1979): 269 - 313.

Stern, H. H., "What Can We Learn From the Good Language Learner." Canadian Modern Language Review 31 (1975): 304-318.

Stern, H. Anthony, "Selection of Overseas Personnel." Personnel Journal 45 (1966): 224 - 228.

Sternin, Martin I., "Toward the Specification of a General Adaptation Process in Americans Overseas." Unpublished paper, n.d.

Students and the Missionary Problem: Addresses Delivered at the International Student Missionary Conference, London, January 2-6, 1900. London: Student Volunteer Missionary Union, 1900.

Students and the Modern Missionary Crusade. New York: Student Volunteer Movement for Foreign Missions, 1906.

Stewart, Edward C., "Dimensions in Cross-Cultural Instruction." P. C. Program and Training Journal 1 (1973): 21 - 30.

Stewart, Edward C., "The Three Stages of Intercultural Communication." Unpublished paper, n.d.

Stewart, Edward C. and Pryle, John B., "An Approach to Cultural Self-Awareness," Paper presented at the 74th Annual Convention of the American Psychological Association. New York City, 1966.

Stoner, James A. F., Aram, John D. and Rubin, Irwin M., "Factors Associated with Effective Performance in Overseas Work Assignments." Personnel Psychology 25 (1972): 303 - 318.

Strauss, Gary, "A Supracultural Approach to a Cross/Multicultural Challenge ," Paper presented at the 1st Conference on Christian Missions and Mental Health Professionals. Angola, Indiana, 1980.

Street, Richard L. and Giles, Howard, "Speech Accomodation Theory: A Social Cognitive Approach to Language and Speech Behavior." In Social Cognition and Communication, pp. 193 - 226. Edited by Michael E. Roloff and Charles R. Berger. Beverly Hills, CA.: Sage Publishing, 1982.

Sturtevant, William C., "Studies in Ethnoscience." In Culture and Cognition: Rules, Maps, and Plans, pp. 129 - 167. Edited by James P. Spradley. San Francisco, CA: Chandler Publishing Company, 1972.

- Swanson, Donald A., "Volunteer Performance Objectives: A Proposal for Setting Guidelines for Volunteers." Peace Corps Program and Training Journal 11 (1974): 6 - 16.
- Sypher, Beverly Davenport, "The Importance of Social Cognitive Abilities in Organizations." In Competence in Communication: A Multi-Disciplinary Approach, pp. 103 - 127. Edited by Robert N. Bastrom. Beverly Hills, CA.: Sage Publishing, 1984.
- Szapocznik, Jose and Kurtines, William, "Acculturation, Biculturalism and Adjustment Among Cuban Americans." In Acculturation: Theory, Models, and Some New Findings, pp. 139 - 159. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.
- Taber, Charles R., The World is Too Much With Us: "Culture" in Modern Protestant Missions. Macon, Georgia: Mercer University Press, 1991.
- Taft, Ronald, "Coping with Unfamiliar Cultures." In Studies in Cross-Cultural Psychology, pp. 121 - 153. Edited by Neil Warren. London, England: Academic Press, 1977.
- Taft, Ronald, "The Psychological Adaptation of Soviet Immigrants in Australia." In Cross-Cultural Adaptation: Current Approaches, pp. 150 - 167. Edited by Young Yun Kim and William B. Gudykunst. International and Intercultural Communication Annual, 11. Beverly Hills, CA: Sage Publishing, 1987.
- Tanner, Jean M., "Exploring Role Shock: An Analysis of Intercultural Encounters," Paper presented at the Conference of the International Communication Association. Boston, MA, 1982.
- Taylor, D. M. and Jaggi, V., "Ethnocentrism and Causal Attribution in a South India Context." Journal of Cross-Cultural Psychology 5 (1974): 162-171.
- Taylor, Glenn C., "Spiritual Dimensions in Mental Health," Paper presented at the 3rd Conference on Mental Health and Missions. Angola, Indiana, 1982.
- Taylor, Glenn C., "Interpersonal Skills in Leadership & Ministry," Paper presented at the 4th Conference on Mental Health and Missions. Angola, Indiana, 1983.
- Taylor, Jim, "Where are the Evangelists? Mission Agencies Want To Know." The Gospel Message 3 (1989): 3.
- Teske, Raymond H.C. and Nelson, Bardin H., "Acculturation and Assimilation: A Clarification." American Ethnologist 1 (1974): 361-363.
- Thayer, Clarence R., "The Relationship Between Clinical Judgments of Missionary Fitness and Subsequent Ratings of Actual Field Adjustment." Review of Religious Research 14 (1973): 112 - 116.
- Thayer, Clarence R., "The Relationship of Certain Psychological Test Scores to Subsequent Ratings of Missionary Field Success." Ph.D. Dissertation, University of Pittsburgh, 1951.
- Thomson, Captane P. and English, Joseph T, "Premature Return of Peace Corps Volunteers." Public Health Reports 79 (1964): 1065 - 1073.
- Thrasher, Joyce M., "Survey of Responses of Twenty Mission Board Leaders to a Questionnaire Regarding Existant and Potential Missions' Problems," Paper presented at the 4th Conference on Mental Health and Missions. Pokagon State Park, Angola, Indiana, 1982.



- Tippett, Alan R., "Probing Missionary Inadequacies at the Popular Level." The International Review of Missions 49 (1960): 411-419.
- Torbiorn, Ingemar, "Culture Barriers as a Social Psychological Construct: An Empirical Validation." In Cross-Cultural Adaptation. Current Approaches, pp. 168 - 171. Edited by Young Yun Kim and William B. Gudykunst. Beverly Hills, CA.: Sage Publishing, 1987.
- Toros, Vita, "Who's Afraid of Transparency?" The Bridge (1978): 17 - 18, 33 - 34.
- Torres-Matrullo, Christine M., "Acculturation, Sex-Role Values and Mental Health Among Mainland Puerto Ricans." In Acculturation: Theory, Models, and Some New Findings, pp. 111 - 138. Edited by Amado M. Padilla. AAAS Selected Symposium Series, 39. Boulder, CO: Westview Press, 1980.
- Townsend, John S., II and Wichern, Frand B., "The Development of the Spiritual Leadership Qualities Inventory." Journal of Psychology and Theology 12 (1984): 305 - 313.
- Triandis, Harry C., The Analysis of Subjective Culture. New York: John Wiley & Son, Ltd., 1972.
- Triandis, Harry C., "Culture Training, Cognitive Complexity and Interpersonal Attitudes." In Cross-Cultural Perspectives on Learning, pp. 39 - 77. Edited by Richard W. Brislin, Stephen Bochner and Walter J. Lonner. New York: Halstead Press Division, John Wiley and Sons, 1975.
- Triandis, Harry C., "Essentials of Studying Cultures." In Handbook of Intercultural Training, pp. 82 - 117. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, 1 - Issues in Theory and Design. New York: Pergamon Press, Inc. , 1983.
- Triandis, Harry C., Interpersonal Behavior. Monterey, CA.: Brooks/Cole Publishing Co., 1977.
- Triandis, Harry C., "Some Universals of Social Behavior." Personality and Social Psychology Bulletin 4 (1978): 1-16.
- Triandis, Harry C., "Theoretical Framework for Evaluation of Cross-Cultural Training Effectiveness." International Journal of Intercultural Relations 1 (1977): 19 - 44.
- Triandis, Harry C., "A Theoretical Framework for the More Efficient Construction of Culture Assimilators." International Journal of Intercultural Relations 8 (1984): 301 - 330.
- Triandis, Harry C., Brislin, Richard and Hui, C. Harry, "Cross-Cultural Training Across the Individualism-Collectivism Divide." International Journal of Intercultural Relations 12 (1988): 269 - 289.
- Triandis, Harry C. and Vassiliou, Vasso, "A Comparative Analysis of Subjective Culture." In The Analysis of Subjective Culture, pp. 299-335. Edited by Harry C. Triandis. New York: John Wiley and Sons, Ltd, 1972.
- Triandis, Harry C. and Vassiliou, Vasso, "Frequency of Contact and Stereotyping." Journal of Personality and Social Psychology 7 (1967): 316 - 328.
- Trower, Peter, "Fundamentals of Interpersonal Behavior: A Social-Psychological Perspective." In Research and Practice in Social Skills Training, pp. 3 - 40. Edited by Alan S. Bellack and Michel Hersen. New York: Plenum Press, 1979.

- Trower, Peter, "How to Lose Friends and Influence Nobody: An Analysis of Social Failure." In The Analysis of Social Skill, pp. 257 - 273. Edited by W.T. Singleton, P. Spurgeon and R. B. Stammers. New York: Plenum Press, 1980.
- Trower, Peter, "Social Skills Training and Social Anxiety." In Handbook of Social Skills Training, pp. 39 - 65. Edited by Clive R. Hollin and Peter Trower. International Series in Experimental Social Psychology, 2. London, England: Pergamon Press, 1986.
- Tucker, Michael F., "CRE Studies of Peace Corps Training in Brazil." P. C. Program and Training Journal 1 (1973): 4 - 10.
- Tucker, Michael F., Screening and Selection for Overseas Assignment: Assessment and Recommendations to the U.S. Navy. Extracts from a report to the U. S. Navy by The Center for Research and Education under Contract #N00600-73-D-07800, Denver, Colorado: 1974.
- Tucker, Michael F. and Baier, Vicki Eaton, "Research Background for the Overseas Assignment Inventory." Boulder, CO: Moran, Stahl and Boyer, Inc., 1982.
- Tucker, Michael and Benson, P. G., "The Prediction of Intercultural Adjustment: A Longitudinal Validation," Paper presented at the International Conference of the Society for Intercultural Education, Training, and Research. Mexico City, Mexico, 1979.
- Tucker, Michael F., Raik, Howard, Rossiter, David and Uhes, Michael, Improving Cross-cultural Training and Measurement of Cross-cultural Learning. Denver, CO: Center for Research and Education, 1973.
- Tucker, Michael F. and Schiller, J. E., "Overview Summary for an Assessment of the Screening Problem for Overseas Assignment." Denver, CO: Center for Research and Education, 1975.
- Tucker, G. R., Hamayan, E. and Genessee, F. H., "Affective, Cognitive, and Social Factors in Second Language Acquisition." Canadian Modern Language Review 32 (1976): 214-226.
- Tucker, Michael F. and Wight, Albert, "A 'Culture Gap' in International Personnel Programs." The Bridge, Winter 1981, pp. 11 - 13.
- Tung, Rosalie L., "Selection and Training of Personnel for Overseas Assignments." Columbia Journal of World Business (1981): 68 - 75.
- Turner, R., "Singleness on the Mission Field," Paper presented at the 2nd Conference on Mental Health and Missions. Angola, Indiana, 1981.
- Tyler, Ralph, Basic Principles of Curriculum and Instruction. Chicago: The University of Chicago Press, 1950.
- Tyler, V. Lynn, "A Contextual, Componential, and Prismatic Model of Intercultural Communication Process/Experience(s)." Provo, Utah: Language Research Center, Brigham Young University, August 1976.
- Tyler, V. Lynn and Hall, Peggy, "Patterns of Thought in Inter-Cultural Communication: (Perceiving and Expressing)." Provo, Utah: Brigham Young University, 1977.



- Tzeng, Oliver C. S., "The Use of the Atlas of Affective Meanings in Intercultural Training." In Handbook of Intercultural Training, Vol. 1: Issues in Theory and Design, pp. 224-252. Edited by Dan Landis and Richard W. Brislin. Pergamon General Psychology Series, New York, NY: Pergamon Press, Inc., 1983.
- Uhes, Michael J. and Shybut, John, "Personal Orientation Inventory as an Predictor of Success in Peace Corps Training." Journal of Applied Psychology 55 (1971): 498-499.
- Uncapher, Philip and Weaver, Gary, "The Nigerian Experience: Overseas Living and Value Change," Paper presented at the SIETAR Annual Conference. Vancouver, B.C., 1981.
- Underwood, Willard A., "Cross-Cultural Communication and Effective Listening." Journal of the Illinois Speech and Theatre Association 30 (1976): 26 - 30.
- Upchurch, Harley M., "Toward the Study of Communities of Americans Overseas." Arlington, VA: Human Resources Research Organization (HumRRO), 1970.
- Useem, John, "The Study of Cultures," Paper presented at the Thirty-third Annual Meeting of the Ohio Valley Sociological Society. 1971.
- Useem, John and Donoghue, J. D., "Men in the Middle of the Third Culture: The Roles of American and Non-Western People in Cross-Cultural Administration." Human Organization 22 (1963): 169 - 173.
- Useem, John and Useem, Ruth Hill, "The Interfaces of a Bi-National Third Culture: A Study of the American Community in India." The Journal of Social Issues 23 (1967): 130 - 143.
- Walker, Doug, "Roadblocks to Missionary Creativity and How to Overcome Them." Evangelical Missions Quarterly 15 (1979): 143-149.
- Walker, Tim, "The Role of the Training Sector - Part 1." The Bridge (1981): 29 - 30.
- Walls, Andrew F., "'The Best Thinking of the Best Heathen': Humane Learning and The Missionary Movement." In Religion and Humanism, pp. 341-353. Edited by Keith Robbins. Studies in Church History, 17. Oxford: Blackwell for the Ecclesiastical History Society, 1981.
- Walls, Andrew F., "Missionary Vocation and the Ministry: The First Generation." In New Testament Christianity for Africa and the World, pp. 141-156. Edited by M.E.Glasswell and F.W. Fashole-Luke. London: Paternoster Press, 1974.
- Ward, Ted, "Non-formal Education--What is it?" In Handbook For Non-formal Education, pp. 12-21. Edited by Ted Ward and Joe Levine. East Lansing: Michigan State University, 1984.
- Ward, Ted and Dettoni, John M., "Increasing Learning Effectiveness through Evaluation." In Effective Learning in Non-formal Education, pp. 39-44. Edited by Ted Ward and William A. Herzog. East Lansing, Michigan: Program of Studies in Non-formal Education, Michigan State University, 1974.
- Ward, Ted and McKinney, Lois, ed., Non-Formal Education and the Church. Michigan State University, Unpublished paper, n.d.
- Ward, Ted and Rowen, Samuel F., "The Significance of the Extension Seminary." Evangelical Missions Quarterly 9 (1972): 18-25.

- Ward, Ted, Sawyer, Donald F., McKinney, Lois and Dettoni, John, "Effective Learning: Lessons to be Learned from Schooling." In Effective Learning In Non-formal Education, pp. 14-64. Edited by Ted Ward and William A. Herzog. East Lansing, Michigan: Program of Studies in Non-Formal Education, Michigan State University, 1974.
- Warr, Peter B. and Knapper, Christopher, The Perception of People and Events. London, England: John Wiley and Sons, 1968.
- Watzlawick, Paul, Beavin, Janet Helmick and Jackson, Don D., "Some Tentative Axioms of Communication." In Interpersonal Communication: A Relational Perspective, pp. 32 - 42. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN.: Burgess Publishing Co., 1980.
- Webb, Leland, "Life After Resignation." The Commission (Feb-March 1988): 50.
- Wederspahn, Gary M., "Hidden Messages and Self-fulfilling Prophecies ." The Bridge 6 (1981): 28.
- Wederspahn, Gary M., "The Overseas Wife: Excess Baggage?" 5 (1980): 16.
- Weeks, William H., Pedersen, Paul B. and Brislin, Richard W., A Manual of Structured Experiences for Cross-Cultural Learning. Washington, D. C.: SIETAR, 1977.
- Weinstock, S. Alexander, Acculturation and Occupation: A Study of the 1956 Hungarian Refugees in the United States. The Hague, Netherlands: Martinus Nyhoff, 1969.
- Weissman, D. and Furnham, Adrian, "The Expectations and Experiences of a Sojourning Temporary Resident Abroad: A Preliminary Study." Human Relations 40 (1987): 313-326.
- Welford, A. T., "The Concept of Skill and Its Application to Social Performance." In The Analysis of Social Skill, pp. 11 - 22. Edited by W.T. Singleton, P. Spurgeon and R. B. Stammers. New York: Plenum Press, 1980.
- Welles, Paddy S., "Coping with Culture Shock: The Adventures of 'Peppermint Paddy'." The Bridge 6 (1981): 44 - 47.
- Werkman, Sidney, "A Heritage of Transience: Psychological Effects of Growing Up Overseas." In The Child in His Family: Children and Their Parents in a Changing World, pp. 117 - 128. Edited by E. James Anthony Chiland and Colette Chiland. New York: John Wiley & Sons, 1978.
- Werkman, Sidney, Farley, Gordon K., Butler, Craig and Quayhagen, Mary, "The Psychological Effects of Moving and Living Overseas." Journal of The American Academy of Child Psychiatry 20 (1981): 645 - 657.
- White, Frances J., "The Phenomena in Separation and Missionaries," Paper presented at the 1st Conference on Christian Missions and Mental Health. Angola, Indiana, 1980.
- White, Frances J., "Some Reflections on the Separation Phenomenon Idiosyncratic to the Experience of Missionaries and Their Children." Journal of Psychology and Theology 11 (1983): 181 - 188.
- White, Frances J., "Summary of Session: Characteristics of a Healthy Mission System," Paper presented at the 4th Conference on Mental Health and Missions: The Fourth Conference. Angola, Indiana, 1983.
- White, Leslie A., The Concept of Cultural Systems, a Key to Understanding Tribes and Nations. Columbia University Press, 1975.



- Wiemann, John M., "Explication and Test of a Model of Communicative Competence." In Interpersonal Communication: A Relational Perspective, pp. 100 - 116. Edited by Ben W. Morse and Lynn A. Phelps. Minneapolis, MN: Burgess Publishing Company, 1980.
- Wiemann, John M. and Kelly, Clifford W., "Pragmatics of Interpersonal Competence." In Rigor and Imagination, pp. 281 - 297. Edited by Carol Wilder and John H. Weakland. New York: Praeger Publishers, 1981.
- Wiemann, John M. and Backlund, Philip, "Current Theory and Research In Communicative Competence." Review of Educational Research 50 (1980): 185 - 199.
- Wight, Albert R., "Concepts and Assumptions from Kurt Lewin and Laboratory Training," Workshop: Designing Experiential Training Programs, 14th Congress of SIETAR International. Denver, CO., 1988.
- Wight, Albert R., "The Experiential Learning Model," Paper presented at the 14th Congress of the International Society for Intercultural Education, Training and Research. Denver, 1988.
- Wight, Albert R. and Casto, Glendon, Training and Assessment Manual for a Peace Corps Instrumented Experiential Laboratory. Estes Park, Colorado: Center for Research and Education, 1969.
- Wight, Albert R. and Hammons, Mary Anne, Guidelines for Peace Corps Cross-Cultural Training. Part I: Philosophy and Methodology. 3 Volumes. Estes Park, Colorado: Center for Research and Education, 1970.
- Wight, Albert W., "Participative Education and the Inevitable Revolution." Journal of Creative Behaviour 4 (1970): 234-282.
- Williams, C. P., "The Recruitment and Training of Overseas Missionaries in England between 1850 and 1900 with Special Reference to the Records of the Church Missionary Society, the Wesleyan Methodist Missionary Society, and London Missionary Society, and the China Inland Mission." M. Litt. Thesis, University of Bristol, 1976.
- Williams, Donald and Kliever, Dean, Perspectives on Psychological Assessment of Candidates for Cross-Cultural Christian Missions. Paper presented at the Convention of the Evangelical Foreign Missions Association, Kansas City, Missouri, 1980.
- Williams, Kenneth L., "Biblical Strategies for Handling Stress," Paper presented at the 3rd Conference on Mental Health and Missions. Angola, Indiana, 1982.
- Williams, Kenneth L., "Helping Others Resolve Conflicts," Paper presented at the 6th Conference on Mental Health and Missions. Angola, Indiana, 1985.
- Williams, Kenneth L., "Characteristics of the More Successful and Less Successful Missionaries," Paper presented at the 2nd Conference on Mental Health and Missions. Angola, Indiana, 1981.
- Williams, Robert D., "Criteria for Competence ." Psychological Reports 44 (1979): 167 - 187.
- Wilson, A. T. M., "Recruitment and Selection for Work in Foreign Cultures." Human Relations 14 (1961): 3 - 21.

- Winter, Ralph, "Penetrating the New Frontiers." In Unreached Peoples '79, pp. 37-77. Edited by C. Peter Wagner and Edward R. Dayton. Elgin, Illinois: David C. Cook Publishing Co., 1979.
- Winter, Ralph D., "The Task Remaining: All Humanity in Mission Perspective." In Perspectives on the World Christian Movement: A Reader, pp. 312-326. Edited by Ralph D. Winter and Stephen C. Hawthorne. Pasadena, CA: William Carey Library, 1981.
- Winther, Paul C., "Overseas Volunteers: An Exploratory Study of the Consequences of their Experiences and Perceptions Involving Cognitive Dissonance and its Reduction." M.A. Thesis, Michigan State University, 1964.
- Wiseman, Richard L., Hammer, Mitchell R. and Nishida, Hiroko, "Predictors of Intercultural Communication Competence." International Journal of Intercultural Relations 13 (1989): 349 - 370.
- Witmer, S. A., Report on Preparation of Missionaries in Bible Institutes and Bible Colleges. Fort Wayne, Indiana: Accrediting Association of Bible Colleges, 1959, 1960.
- Wonderling, Larry, "Personality: A Scheme for Self Assessment and Cross-Cultural Comparison." Peace Corps Program and Training Journal 11 (1974): 4 - 5.
- World Missionary Conference (To Consider Missionary Problems in Relation to the Non-Christian World). 1910. Edinburgh: Oliphant, Anderson, and Ferrier, 1910.
- Wright, Robert W., "Cultural Adjustments Faced by MKs." The Journal of Pastoral Practice 1 (1977): 97 - 118.
- Wrubel, Judith, Benner, Patricia and Lazarus, Richard S., "Social Competence from the Perspective of Stress and Coping." In Social Competence, pp. 61-99. Edited by Jeri Dawn Wine and Marti Diane Smye. New York: Guilford Press, 1981.
- Yellen, Ted M. I. and Mumford, Sandra J., "The Cross-Cultural Interaction Inventory: Development of Overseas Criterion Measures and Items that Differentiate between Successful and Unsuccessful Adjusters." San Diego, CA: Navy Personnel Research and Development Center, 1975.
- Yoshikawa, Muneo Jay, "The "Double-Swing" Model of Eastern-Western Intercultural Communication." Honolulu, HI: East-West Communication Institute, 1980.
- Yoshikawa, Muneo Jay, "Cross-Cultural Adaptation and Perceptual Development." In Cross-Cultural Adaptation: Current Approaches, pp. 140 - 148. Edited by Young Yun Kim and William B. Gudykunst. International and Intercultural Communication Annual, 11. Beverly Hills, CA: Sage Publishing, 1987.
- Zaharna, R. S., "Self-Shock: The Double-Binding Challenge of Identity." International Journal of Intercultural Relations 13 (1989): 501 - 525.
- Zeira, Yoram and Banai, Moshe, "Present and Desired Methods of Selecting Expatriate Managers for International Assignments." Personnel Review 13 (1984): 29 - 35.



**Appendix 1:**  
**Missionary Self-Assessment Questionnaire**

## **SECTION I**

### **GENERAL BACKGROUND AND EDUCATION**

#### **Part 1: GENERAL BACKGROUND**

1. Number: \_\_\_\_\_
2. Sex: ☐ male ☐ female
3. Age: ☐ under 20      ☐ 20-29      ☐ 30-39  
          ☐ 40-49      ☐ 50-59      ☐ over 60
4. Nationality: ☐ American ☐ Canadian ☐ other \_\_\_\_\_
5. Marital status:  
☐ single  
☐ married to North American  
☐ married to a national  
☐ widow/widower  
☐ other
6. Maternal language: ☐ English ☐ Portuguese ☐ Spanish ☐ other: \_\_\_\_\_
7. How would you compare your status here compared to what you had in Canada or the United States?  
☐ much worse      ☐ worse      ☐ the same  
☐ better      ☐ much better      ☐ not sure
8. Where did you spend the majority of your growing-up years?  
☐ farming community  
☐ small town  
☐ city suburbs  
☐ inner city  
☐ other: \_\_\_\_\_
9. Was your family considered politically: ☐ liberal ☐ conservative ☐ neither
10. Was your family considered:  
☐ poorly educated      ☐ moderately educated      ☐ well educated
11. Would you describe relationships in your family as you were growing up as:  
☐ often tense      ☐ fairly good      ☐ very close and affectionate      ☐ other \_\_\_\_\_  
Comments:
12. How would you describe discipline you received in your home when you were growing up?  
☐ harsh      ☐ moderate      ☐ lax      ☐ non-existent      Comments:



13. As a child were you generally:
- ☐ deeply included in all family activities
  - ☐ encouraged to play out of the home
  - ☐ forced to be independent
  - ☐ ignored

**Part 2: TYPES OF MINISTRY**

1. Mission/Organization that you work under or with: \_\_\_\_\_
2. Number of years that you have been a cross-cultural missionary?
  - ☐ 1-4 years
  - ☐ 5-9 years
  - ☐ 10-14 years
  - ☐ 15-19 years
  - ☐ 20-24 years
  - ☐ 25 or more years
3. What specific ministry would you say your prior training has prepared you for? Check as many items as are applicable.
  - ☐ pastoral ministry
  - ☐ music ministry
  - ☐ Christian education
  - ☐ Christian camping
  - ☐ education/teaching
  - ☐ administration/management
  - ☐ accounting/financial management
  - ☐ medical
  - ☐ agricultural
  - ☐ technical: engineering, electronics, aviation, mechanical, etc.
  - ☐ translation
  - ☐ evangelism
  - ☐ pioneer church planting
  - ☐ other: \_\_\_\_\_
4. What is your present ministry? \_\_\_\_\_
5. What other primary ministries have you had in the past on the field? \_\_\_\_\_  
\_\_\_\_\_
6. Do you presently work closely with a Brazilian national counterpart? ☐ yes ☐ no
7. In what setting(s) are you working?
  - ☐ jungle ☐ rural ☐ suburban ☐ urban or inner city ☐ other \_\_\_\_\_

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**Part 3: GENERAL EDUCATION**

1. Education: (check as many as are applicable)  
☐ completed High School                      ☐ completed Technical School  
☐ completed Community College           ☐ completed Bible School or Bible College  
☐ completed one Seminary degree        ☐ completed more than one Seminary degree  
☐ completed one University degree       ☐ completed more than one University degree  
☐ other: \_\_\_\_\_
2. Degrees completed:  
☐ B.A.                      ☐ B.Sc.    ☐ B.Th.    ☐ B.R.E.    ☐ M.A.    ☐ M.Div.  
☐ M.Th. or Th.M.    ☐ M.R.E.    ☐ D.Th.    ☐ D.Miss.    ☐ Ph.D.  
☐ Other: \_\_\_\_\_
3. Are you in progress on a degree now? ☐ yes ☐ no (If yes, what degree: \_\_\_\_\_)
4. Undergraduate schools attended for bachelor's degree (or equivalent) studies:  
\_\_\_\_\_
5. Graduate schools attended for Master's degree studies:  
\_\_\_\_\_
6. Post-graduate schools attended for Doctoral studies:  
\_\_\_\_\_
7. Did you travel in other countries before coming to this country as a missionary?  
☐ yes ☐ no
8. If yes, in what capacities:  
☐ tourist ☐ missionary ☐ professional/business ☐ military ☐ other
9. In which of the following ways did you receive training in the language(s) of this country :  
(Check multiple items if applicable)  
☐ formal language training in a language school  
☐ formal language training in a University setting  
☐ Use of field language learning methodology (ie. LAMP, LEARN, BALL, etc.)  
☐ informal: "learn as one can" with no set training  
☐ other: \_\_\_\_\_
10. **Before coming to the mission field** which of the following did you have experience with?  
Check as many as are applicable. (Question continued on next page)  
☐ No pre-field or on-field training  
☐ Your own mission candidate and pre-field training programs  
    ☐ Was an internship in a church required by your mission?  
    ☐ Was an internship in ethnic ministry required by your mission?  
    ☐ Did you have a "bootcamp" pre-field or on-field training experience?  
    How long was your candidate or pre-field training: \_\_\_\_\_



- 
- ☐ Missionary Internship (training organization in Farmington, Michigan)
    - ☐ Pre-field Orientation Program (PFO)
    - ☐ Program in Language Acquisition Techniques (PILAT)
    - ☐ Culture and Language Orientation (CLO)
    - ☐ Church-based Internship
    - ☐ Urban-Ethnic Internship
    - ☐ Other: \_\_\_\_\_
  - ☐ Link Care
    - ☐ Candidate Assessment Program
    - ☐ The Cross-cultural Learning Center
  - ☐ Toronto Institute of Linguistics
  - ☐ Wycliffe/SIL training in linguistics
  - ☐ Mission Training and Resource Center (MTRC)
    - ☐ Field Training Program
    - ☐ Residential Training for Candidates (Los Angeles)
  - ☐ U.S. Center for World Mission. Type of training: \_\_\_\_\_
  - ☐ Canadian Center for World Mission Training: \_\_\_\_\_
  - ☐ Northwest Center for World Mission Training: \_\_\_\_\_
  - ☐ Operation Mobilization
    - ☐ Summer program
    - ☐ One Year Program Area of the world: \_\_\_\_\_
    - ☐ Two Year Program Area of the world: \_\_\_\_\_
  - ☐ Youth With a Mission
    - ☐ Discipleship training
    - ☐ Leadership training
    - ☐ Other: \_\_\_\_\_
  - ☐ Mentoring by fellow missionary
  - ☐ Mentoring by national pastor
  - ☐ Other training: \_\_\_\_\_
11. Since coming to the field which of the following have you had training with, or used the training services of?
- ☐ Seminary or Bible College for degree
  - ☐ Seminary or Bible College for upgrading/enrichment education
  - ☐ Missionary Internship
    - ☐ Furlough Missionary Program
    - ☐ Missionary Kids Orientation
    - ☐ Continuing Education for Missionaries (Workshop)
    - ☐ Mission Leaders Workshop
  - ☐ Mission Training and Resource Center (MTRC)
    - ☐ Extension Training Program (seminars and courses)
    - ☐ Residential Training for Missionaries (Los Angeles)

- ☐ Link Care
    - ☐ Furlough Evaluation Program
    - ☐ Restoration/Personal Growth Program
    - ☐ Re-entry Program
    - ☐ M K. Program
  - ☐ Church-sponsored training programs.
  - ☐ Other training opportunities used:
12. Which of the following are available to you on the field for your on-going personal and ministry development?
- ☐ annual field conferences
  - ☐ enrichment courses offered by the mission
  - ☐ enrichment courses offered by external agencies
  - ☐ a "books and journals" reading program
  - ☐ audio and video tape library
  - ☐ self-study materials
  - ☐ consultations for missionaries in areas of ministry
  - ☐ periodical workshops each year
  - ☐ focused "on-the-job" training by "experts," peers, fellow missionaries, national pastors, etc.
  - ☐ training of new missionaries by veterans
  - ☐ others \_\_\_\_\_
- 
13. Does your mission have a policy requiring you to take enrichment courses or training during furloughs?
- ☐ yes    ☐ no    Comments:
14. Do your mission provide funding for you if you want to further your formal education or training during your furlough?
- ☐ yes    ☐ no
15. Do your mission provide time for you if you want to get further your formal education or training during your furlough?
- ☐ yes    ☐ no
16. If you have continued your formal education on the graduate (masters) or post-graduate (doctoral) level, have you felt that your studies have actually given you the additional knowledge and skills that you need for improving your ministry? Add any comments you would like to:
- ☐ exactly what is needed
  - ☐ helpful
  - ☐ falls short of my real needs
  - ☐ almost useless
  - ☐ uncertain
17. Are you satisfied that you are taking sufficient advantage of the resources and opportunities to develop yourself and your ministries? Add comments, if desired.
- ☐ taking full advantage
  - ☐ taking some advantage
  - ☐ taking little advantage
  - ☐ uncertain



Part 4: SPECIFIC EDUCATIONAL CONTENT

1. In this question we want to know what training you have received, what value it has been in your life and ministry, and whether you sense current need for the training listed. Please check off for each of the following:
- 1) whether you received each specific education or training (and if so, how),
  - 2) the value the training has had for your life and work (if you received it)
  - 3) the extent to which you feel a current need today for learning more in that area (whether you've had previous training or not).

	TYPE OF TRAINING RECEIVED			VALUE OF TRAINING				IS THIS INFORMATION A CURRENT NEED?			
	No training	Self-taught	Formal training	No value	Some value	Moderate value	Much value	No need	Some need	Moderate need	High need
Accounting											
Administration											
Anthropology											
Apologetics											
Church development											
Church growth											
Church management											
Church planting theory, strategy, and methods											
Community entry											
Conflict management											
Contextualization											
Cross-cultural communication											
Cross-cultural counselling											
Cross-cultural evangelism											
Cross-cultural psychology											
Culture and change											
Culture shock/culture stress management											
Culture-study skills/ethnographics											
Decision-making skills											
Demographic study methods											
Ecumenics											
Family life/child development marital dynamics											
Field language learning											
Field logistics: food, health, housing, etc.											
Financial Management											
Functional health maintenance/medicine											
Group communication skills											
Identifying and developing new ministry opportunities											
Innovation in ministry											
Interpersonal communication											
Issues of justice and ministry											
Leading evangelistic Bible studies											
Linguistic and kinesic (non-verbal) analysis											

	TYPE OF TRAINING RECEIVED			VALUE OF TRAINING				IS THIS INFORMATION A CURRENT NEED?			
	No training	Self-taught	Formal training	No value	Some value	Moderate value	Much value	No need	Some need	Moderate need	High need
Maintaining personal spiritual dynamics											
Ministering to home constituency (supporters)											
Ministry assessment and evaluation											
Ministry Ethics											
Missiological trends											
Mission policies, principles, and culture											
National church leadership development											
National church mission relationships											
Non-verbal communication skills											
Pastoral ministry											
Personal maintenance skills (spiritual, emotional, physical)											
Philosophy											
Political science											
Preparing national church for suffering											
Problem solving skills											
Psychology											
Radical theologies confronted on the field											
Relating to local and national political authorities											
Relating to poverty											
Role of the Holy Spirit in ministry											
Sociological study skills											
Sociology and ministry											
Translation theory and skills											
Spiritual gifts											
Spiritual warfare											
Stress management											
Study of target culture											
Study of target religion											
Systematic and Biblical theology											
Teaching and assimilating new believers into the church											
Theology of mission											
Understanding cultural values and world view											
Women's role ministries											
Christian Education											



2. Which of the following kinds of educational or training methods did you experience in your pre-field or on-field training (given by your mission or a pre-field training organization such as Link Care). Please indicate whether such activities took place, when they took place, and how valuable they were to your present life and work. If you do not understand what some of the following terms are, check "not certain" under the "Received" column.

ACTIVITIES	RECEIVED TRAINING?			PLACE OF TRAINING?			BENEFIT OF TRAINING ?			
	Yes	No	Not sure	pre-field training	on-field training	furlough training	very useful	generally useful	somewhat useful	not useful
Classes in philosophy										
Classes in mission policy										
Classes in anthropology										
Classes in sociology										
Classes in evangelism										
Classes in psychology										
Classes in church planting										
Reading assignments orienting to the mission and field										
Ethnic ministry assignments										
Orientation to moving cross-culturally										
Psychological tests										
Audio-visuals										
Field trips										
Culture Assimilators										
Programmed instruction										
Case Studies										
Small group discussions										
Required preparatory immersion in a different culture										
Role-plays										
Simulation games (ie. Bafa Bafa, Albatross, etc)										
Critical incidences										
Value clarification exercises										
Exercises to reduce anxiety/fear										
Lists of do's and don'ts										
Modelling of language learning										
Modelling of culture learning										
Modelling of problem solving										
Modelling of cross-cultural ministry										
Area studies										
Briefings by mission personnel										
Advice from fellow missionaries										
Advice from nationals in ministry										
Advice from national friends										
Live-in with national family										
Introduction to the culture by North Americans										
Introduction to the culture by other internationals										
Introduction to the culture by nationals										

SECTION II

PERSONAL DEVELOPMENT

Part I: Personal Growth

As a result of your experience ministering in this culture, how much have you changed in the following areas? Please place a “+” (plus) where there has been positive change and a “—” (minus) where there has been negative change. If uncertain, simply check the “uncertain” column.

AREA	DEGREE OF CHANGE						
	N/A	Uncertain	Very little	Little	Some	Much much	Very
1. Intellectual development							
2. Spiritual development							
3. Emotional stability							
4. Interpersonal skills development							
5. Marital relationship development							
6. Development of relationship with children							
7. Communication skills development							
8. Feelings of self-confidence							
9. Feelings of independence/control							
10. Political opinions							



Part 2: Ministry Growth

Below is a list of areas related to “ministry knowledge and skill” for the broad range of cross-cultural ministries. As you consider each area in terms of your ministry, check the appropriate space to the right that you feel best reflects your grasp of that area. As you assess yourself, try not to be overly humble, nor over-estimate what your ability might really be.

ABILITY	SCALE					
	Hardly	A little	Somewhat	Well	Very well	Know how and could teach
I have growing Biblical and theological knowledge for the task.						
2. I have skills in utilizing and applying the Word of God and the ability to integrate theological knowledge to all facets of ministry.						
3. I am developing giftings and skills specific to the task that I am called to.						
4. I have the capacity to work harmoniously with others gifted in complementary areas in order to accomplish the task.						
5. I have the ability to assess the cultural, religious, and political context in which I work.						
6. I know how to research and analyze both what missionaries elsewhere are doing and what non-missionary thinkers have written in order to further my ministry.						
7. I have the capacity to formulate and apply credible and workable strategies and plans for ministry in conjunction with others in the mission or in my ministry team.						

SECTION III

LANGUAGE-SPEAKING PROFICIENCY

Instructions: Check each box that is appropriate. Do not continue on the next level until you meet all criteria for the level you are on, e.g. do not mark any level 3 boxes if you can't finish level 2. At the end of level 5, summarize your language proficiency skills in the four questions located in the boxed area. Start below; continue next page.

Level Zero Plus

☐ I can use more than 50 words of my new language in appropriate contexts.

**Level One**

(You are at level One when you can confidently check each of the following Level One items )

- ☐ I can initiate conversations and use appropriate leave-takings to close conversations.
- ☐ I can made a selection from a menu and order a simple meal.
- ☐ I can ask and tell the time of day, the day of the week, and the date.
- ☐ I can go to the market or butcher and ask for vegetables, fruit, milk, bread, and meat, and I can bargain when appropriate.
- ☐ I can tell someone how to get from here to the post office, a restaurant, or a hotel.
- ☐ I can negotiate for a taxi ride or a hotel room and get a fair price.
- ☐ I can make a social introduction of someone else and also give a brief speech to introduce myself.
- ☐ I can understand and correctly respond to questions about my marital status, nationality, occupation, age, and place of birth.
- ☐ I can get the bus or train I want, buy a ticket, and get off where I intended to.
- ☐ I can use the language well enough to assist a newcomer in all of the above Level One situations.

**Level One Plus**

- ☐ I have a One Plus proficiency because I can do all of the Level One activities and at least three of the following Level Two activities.

**Level Two**

(You are at level Two when you can confidently check each of the following Level Two items.)

- ☐ I can give detailed information about the weather, my family, my home, and my living arrangements
- ☐ I can take and give simple messages over the telephone.
- ☐ I can give a brief autobiography and also talk about my plans and hopes.
- ☐ I can describe my most recent job or activity in some detail and also describe my present role as a language learner.
- ☐ I can describe the basic structure of the government in both my home and host countries.
- ☐ I can describe the geography of both my home and host countries.
- ☐ I can describe the purpose and function of the organization I represent.
- ☐ I could use my new language in hiring an employee and agreeing on qualifications, salary, hours, and special duties.
- ☐ I feel confident that my pronunciation is always intelligible.



- ☐ I feel confident that people understand me when I speak in the new language, at least 80% of the time. I am also confident that I understand what native speakers tell me on topics like those of Level Two.
- ☐ I could use my new language well enough to assist a newcomer on any of the Level Two situations.

**Level Two Plus**

- ☐ I have a Two Plus proficiency because I can meet at least three of the following Level Three requirements.

**Level Three**

(You are at level Three when you can confidently check each of the following Level Three items.)

- ☐ I do not try to avoid any of the grammatical features of the language.
- ☐ I now have sufficient vocabulary and grasp of grammatical structure to complete any sentence that I begin.
- ☐ I can speak at a normal rate of speech, with only rare hesitations.
- ☐ I can confidently follow and contribute to a conversation between native speakers when they try to include me.
- ☐ I am able to correctly understand any information given to me over the telephone.
- ☐ I can listen to a speech or discussion on a topic of interest to me and take accurate notes.
- ☐ I can speak to a group of native speakers on a professional subject and have confidence that I am communicating what I want to.
- ☐ I can understand opposing points of view and can politely describe and defend an organizational position or objective to an antagonist.
- ☐ I could cope with a social blunder, an undeserved traffic ticket, or a plumbing emergency.
- ☐ I can understand two or more native speakers talking with each other about a current event or issue.
- ☐ I could serve as an interpreter for a newcomer in any of the Level Three situations.
- ☐ I feel that I can carry out the professional responsibilities of my work in my new language.

**Level Three Plus**

- ☐ I have a Three Plus proficiency because I can meet at least three of the Level Four requirements.

**Level Four**

(You are at level Four when you can confidently check each of the following Level Four items.)

- ☐ I practically never make grammatical mistakes.
- ☐ I can always understand native speakers when they talk with each other.
- ☐ I can understand humor and language puns, and I can actively participate in fun and humorous situations.
- ☐ My vocabulary is extensive and precise enough for me to convey my exact meaning in professional discussions.

- ☐ I feel I have a comprehensive grasp of the local cultural "knowledge bank."
- ☐ I can appropriately alter my speech style for a public lecture, or a conversation with a professor, an employee, or a close friend.
- ☐ I could serve as an informal interpreter for a "bigwig" at a professional or social function.
- ☐ I feel that I could carry out any job assignment as effectively in my second language as in English.

Level Four Plus

- ☐ My vocabulary and cultural understanding are always extensive enough to enable me to communicate my precise meaning.
- ☐ People feel that I share their knowledge bank well enough to talk about and defend any of their beliefs or values.

Level Five

(You are at level Five when you can confidently check each of the following Level Five items.)

- ☐ Native speakers react to me just as they do to each other—I am usually considered an "insider."
- ☐ I sometimes feel more at home in my second language than in English.
- ☐ I can do mental arithmetic in the language without slowing down.
- ☐ I consider myself to be completely bilingual and bicultural, with equivalent ability in English and in my second language.
- ☐ I consider myself a native speaker of the language.

To summarize language proficiency skills,  
please answer the following questions based on your answers above.

- 1. My present speaking skills in Brazilian Portuguese are at the following proficiency level:  
0+      1      1+      2      2+      3      3+      4      4+      5
- 2. My present speaking skills in my second native language are at the following proficiency level: (if applicable)  
0+      1      1+      2      2+      3      3+      4      4+      5
- 3. I have on-going clear goals in deepening my knowledge and use of the language (Portuguese)  
☐ yes   ☐ no   ☐ uncertain
- 4. I feel that I am: (check one)  
☐ Making steady progress  
☐ Making some progress  
☐ Making no progress  
☐ Retrogressing (losing what knowledge I once had)



SECTION IV

Acculturation/Contextualization

Part 1: Acculturation

DIRECTIONS:

Read each of the following statements in terms of your ministry within Brazilian culture and indicate how true it is of you with a check to the right in the appropriate column. Categories:

- Not Applicable (N/A)
- None (no knowledge)
- Very Little (just beginning to be picked up)
- Some (have done some study)
- Quite a bit (learned from involvement with the people and study)
- In-depth (have gone considerably into it out of interest or ministry need)

SCALE:	N/A	None	Very little	Some	Quite a bit	In-depth
I HAVE FACTUAL KNOWLEDGE:						
1. about the oral and written traditions of the culture						
2. about the broad religious (cosmological) beliefs of the culture						
3. about the culture's child-rearing and socialization practices						
4. about what constitutes art and literature in the ethos of this culture						
5. about the rituals of the culture (birth, puberty, marriage, death, etc.)						
6. about kin-relationships in this culture						
7. about the required means by which communication in the society takes place (communication flow)						
8. about the history of this culture/people						
9. about the material culture (techniques for getting food, shelter, healing, harnessing energy, etc.)						
10. about the economic structures of the culture						
11. about the authority structures of this culture.						
12. about how this culture defines success.						

SCALE.	N/A	None	Very little	Some	Quite a bit	In-depth
<b>I UNDERSTAND:</b>						
1. how the oral and written traditions fit together to form the "truths" by which the people live.						
2. the patterns of religious thought and their impact on the life of the people						
3. the connection between the way that children are socialized and patterns of adult relationships						
4. how art, literature, and music express the needs, longings, and beliefs of the culture						
5. why the rituals (birth, puberty, marriage, death, etc.) of this culture take place and how they fit into the patterns of belief						
6. the patterns of kinship in this culture and how communication and relationships function within these patterns						
7. the patterns of communication flow into the culture from outside, from inside the culture out, and in society from top (authorities) to bottom and from bottom to top.						
8. how the history of this people has influenced their culture						
9. the patterns of cultural values seen in the patterns of material culture.						
10. patterns of local economic structure and how these relate to broader Brazilian economic structures (and beyond to the international scene)						
11. how authorities make decisions, communicate these decisions, and exercise authority.						



SCALE.	N/A	None	Very little	Some	Quite a bit	In-depth
<b>I HAVE INSIGHT..</b>						
1. into the "cultural character" of this people (that is, the motives, traits, beliefs, and values shared by the group)						
2. into the basic assumptions and cultural values generated by the religious beliefs of the people						
3. into the world-view of people in this culture						
4. into the impact that the traditions of the culture have made on the <i>ethos</i> ( <i>cultural mind, character, personality</i> ) of the culture						
5. into why people act as they do as a result of the socialization processes						
6. into how kinship patterns represent ways for diffusion of innovation and change						
7. into accepted patterns for community entry						
8. into accepted patterns for relating to authority structures						
9. into accepted and effective communication channels and media						
10. into which people constitutes the core of the society and who the fringe						

SCALE.	N/A	None	Very little	Some	Quite a bit	In-depth
<b>I APPRECIATE...</b>						
1. the music of the people						
2. the art, literature, and traditions of the culture						
3. the social manners of the people						
4. customs related to child rearing						
5. the dress of the people						
6. the language of the people						
7. the values related to authority and individualism						
8. values related to male and female roles and status						
9. values related to honor and self-respect						
10. values arising from cultural traditions						

SCALE.	N A	None	Very little	Some	Quite a bit	In-deptn.
<b>I IDENTIFY WITH AND HAVE ACCEPTED...</b> (have internalized/emotionally accepted)						
1. the patterns by which people handle conflict (for example, use of a third party instead of confrontation)						
2. the oral communication patterns (for example, illustrative vrs. propositional)						
3. media and methods (for example, use of traditional stories, proverbs, etc.)						
4. values and patterns of the culture related to authority, decision-making, and individualism						
5. values of the culture related to male and female roles and status						
6. values of the culture related to honor and self-respect						
7. values of the culture arising from traditions						
8. social patterns of inter-personal relationship						
9. cultural patterns of dress, housing, foods, etc. (living as much like the people as I can)						
10. I respond to people's approval and disapproval (as long as they do not violate biblical/ethical values)						

SCALE.	N.A	None	Very little	Some	Quite a bit	In-deptn.
<b>I KNOW HOW AND ENJOY...</b>						
1. acting politely and "correctly" in social interaction.						
2. expressing cultural customs in my behavior.						
3. to have joking or teasing relationships with nationals.						
4. participating in traditional ceremonies with my national friends.						
5. going to various cultural recreational places (parks, stadiums, gyms, concerts, gatherings, etc.).						
6. balancing the difference between "work" and "play" (or "non-work") in the same way that nationals do.						
7. learning from "mentors" (personal teachers) in the culture						
8. playing an instrument, painting, making pottery, weaving, or some other skill like the people.						



Part 2: Intercultural Ministry Skills

Read each of the following statements in terms of your ministry within Brazilian culture and indicate how true it is of you with a check to the right in the appropriate column. Categories:

- Not Applicable (N/A),
- None (unable to),
- Very Little (not able to do much),
- Some (have some ability),
- Quite a bit (learned from involvement with the people and study),
- Extensively (have considerable skills learned through research and ministry involvement).

SCALE.	N/A	None	Very little	Some	Quite a bit	In-depth
HOW I RELATE TO THE CULTURE:						
1. I can adapt an argument to the attitudes and values of a national.						
2. I am able to shift between the host-culture and my own in non-verbal patterns of communication.						
3. I am comfortable with cultural forms of decision making.						
4. I can discriminate between the various homogenous units (groups of people) that I find in the culture.						
5. I can utilize family linkages for ministry contacts.						
6. I am able to introduce a new concept into the community through the appropriate channels.						
7. I am able to identify the unofficial local leaders.						
8. I could describe where cultural values are in a state of change and why.						
9. I can effectively use individual and cultural felt needs as a vehicle for reaching ultimate needs.						
10. I feel comfortable interacting with nationals in an "equal" rather than a "fatherly" manner.						
11. I feel "at home" in the culture, as comfortable with my host culture's systems as I am with my own.						

SCALE.	N/A	None	Very little	Some	Quite a bit	In-depth
<b>HOW I RELATE MINISTRY AND CULTURE:</b>						
1. It is easy for me to allow nationals to integrate biblical truth into their own systems of functioning.						
2. I feel I know (as a result of research) what form of Christianity and church structure is both biblical and attractive to nationals.						
3. I work well in partnership with or under the direction of national leaders						
4. I constantly monitor my ministry by studying the culture, consulting with national believers, and doing on-going evaluation to make sure that my ministry is valid for the cultural context.						
5. I am able to make effective verbal and non-verbal presentations of Biblical truth that fit the thought-patterns of the culture.						
6. I can understand and appreciate the content and value of cultural definitions of right and wrong, good and evil, sinfulness and holiness. God and man, and speak to these while maintaining my own sense of self, culture, calling, and biblical truth.						
7. I am seeing signs that nationals have caught the import of what I am doing and are beginning to make aspects of the work fit their own unique systems of doing things.						
8. Based on my growing knowledge of the culture, I creatively use root metaphors and analogies of the culture to facilitate personal and corporate church growth.						
9. I am working toward the development of spiritually dynamic local national leaders who are knowledgeable in biblical interpretation and application in terms of cultural needs and issues.						
10. I am working to see the church developed so that as soon as possible I can move on to ministry and development of the church elsewhere.						



## SECTION V

### Spiritual Dimensions

The following questionnaire is designed to find out your opinions and standards relating to spiritual dynamics and ministry. Please answer as honestly and candidly as possible, not undervaluing yourself nor identifying ideals that are not true to you. *Be assured that these answers are totally confidential. Your name is not attached to this, and results are only pooled in general to discover missionary values.*

1. How important is it to be totally dependant on God?  
☐ unimportant    ☐ important    ☐ very important
2. How would you relate this attribute to your life?  
☐ never true    ☐ occasionally true    ☐ generally true    ☐ consistently true
3. How valid is it to have a heart burden for the lost?  
☐ unimportant    ☐ important    ☐ very important
4. How deep is your burden for the lost?  
☐ rarely felt    ☐ occasionally felt    ☐ generally felt    ☐ consistently felt
5. Is quiet confidence in the sovereign work and timing of God important?  
☐ unimportant    ☐ important    ☐ very important
6. Does your life express gentleness and gracious confidence in dealing with others out of trust in God's sovereignty?  
☐ generally not; I am impatient    ☐ occasionally; learning to trust God  
☐ most of the time    ☐ consistently; I act with others as one seeing God at work in their lives
7. Is having a deep desire for holiness important in missionary work?  
☐ unimportant    ☐ important    ☐ very important
8. Are you perceived as a godly person by the community?  
☐ yes    ☐ no    ☐ I don't know
9. Should a missionary be concerned for the many needs he sees every day and for the injustice he encounters?  
☐ yes    ☐ no    ☐ it depends    ☐ uncertain
10. How important is the "purity" of the missionary's thought-life, motives, and actions?  
☐ unimportant    ☐ important    ☐ very important
11. How would you rate the quality of your thought life, motives, and actions?  
☐ constant defeat  
☐ experience more failure than victory  
☐ experience as much failure as victory  
☐ experience more victory than failure  
☐ consistent victory
12. Should a missionary be involved in settling disputes and problems in the church and between believers?  
☐ yes    ☐ no    ☐ it depends    ☐ uncertain

- 
13. How much of your time is spent in settling disputes?  
☐ none    ☐ very little    ☐ 1/4 of my time    ☐ half my time or more  
(☐ check here if your job description calls for this as part of your ministry)
14. If persecution breaks out, how ready should a missionary be to stay in country and face it with national believers?  
☐ not at all    ☐ definitely    ☐ no set answer; depends on circumstances and God's leading
15. To the best of your knowledge of yourself, would you be willing to face persecution with other believers?  
☐ yes    ☐ no    ☐ I don't know
16. How important is it that a missionary be a self-controlled man/woman in all circumstances?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
17. Are you "self-controlled?"  
☐ rarely    ☐ some of the time    ☐ most of the time    ☐ all of the time
18. How important is it that a missionary have a deep knowledge of the Word of God?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
19. My on-going study of the Word of God is...  
☐ stagnant    ☐ weak; sporadic    ☐ generally consistent; growing    ☐ daily; strong and growing
20. How important is it that a missionary have a persevering approach to all areas of life?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
21. How important is the expression of kindness and love in ministry?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
22. How important is prayer in the dynamics of ministry?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
23. How much time do you spend on average in daily prayer (apart from beginnings of meals and meetings)?  
☐ up to five minutes    ☐ up to 15 minutes    ☐ up to half an hour  
☐ up to an hour    ☐ one hour +
24. How important to ministry is the gifting of the Spirit of God?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
25. Are your ministry and your gifting correlated?  
☐ yes    ☐ no    ☐ uncertain
26. How important to ministry is the empowering of the Spirit of God?  
☐ not important    ☐ somewhat important    ☐ important  
☐ very important    ☐ essential to ministry
-



- 
27. Would you say your ministry is empowered by the Spirit of God?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
28. How important to ministry is walking in the Spirit and being led by the Spirit of God?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
29. Would you say that your daily life is characterized generally by a walk in the Spirit?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
30. How important to ministry is the fruit of the Spirit (love, joy, peace, patience, etc.)?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
31. Would you say that your daily life is characterized generally by the evidenced fruit of the Spirit?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
32. Is confession of sin to the Lord important as part of daily life and ministry?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
33. Would you say that you maintain confession of sin to the Lord a consistent part of your life?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
34. Is confession of faults to fellow believers important as part of life and ministry?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
35. Do you make sure that there is nothing between you and fellow believers at all times?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
36. How important to ministry is communion with God in personal devotional life?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
37. Are you able to maintain a daily devotional life of communion with God?  
☐ yes, most of the time   ☐ yes, part of the time   ☐ no   ☐ uncertain
38. To what level should obedience be given to those who are in authority over you in the ministry?  
☐ unquestioning obedience   ☐ obedience qualified by sense of God's leading  
☐ obedience only arising out of mutual consensus and consultation with those in authority  
☐ obedience given only to God
39. How important to ministry is fellowship with fellow missionaries and other nationals in ministry?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
40. How important is ministry with others in a team (in contrast to the individual missionary ministering alone out of need or preference) in light of multiplicity of gifts, encouragement, spiritual warfare, etc. ?  
☐ not important   ☐ somewhat important   ☐ important  
☐ very important   ☐ essential to ministry
-

41. How important is understanding of and use of the "weapons of our warfare"?
- ☐ not important      ☐ somewhat important      ☐ important
- ☐ very important      ☐ essential to ministry
42. Have you personally experienced "power encounter" in spiritual warfare?
- ☐ yes      ☐ no      ☐ uncertain

**SECTION VI**

**PERSONAL DIMENSIONS INVENTORY**

**Part 1: Adjustment**

**Instructions:**

Please complete the following questions by circling one of the five choices for each question.

1. **Adjustment:**  
Compared to other American/Canadian missionaries in this culture whom you have known, how well have you adapted to living here?
- Among the Best Adapted*      *Better than Average*      *Average*      *Less than Average*      *Among the Least Adapted*
2. **Acculturation:**  
Compared to other American/Canadian missionaries in this country whom you have known, how well you gone beyond adaptation to identifying with the people and using their cultural ways, patterns, and values?
- Among the Best Acculturated*      *Better than Average*      *Average*      *Less than Average*      *Among the Least Acculturated*
3. **Family Adjustment:**  
Compared to other American/Canadian missionaries living in this country whom you have known, how well have you, your spouse, and children adapted as a family unit to living in this country and culture?
- Among the Best Adjusted*      *Better than Average*      *Average*      *Less than Average*      *Among the Least Adjusted*
4. **Ministry Effectiveness:**  
Compared to other missionaries whom you have known, how effective are you at handling your ministry responsibilities?
- Highly Effective*      *Better than Average*      *Average*      *Less than Average*      *Ineffective*
5. **Concern with Developing Nationals:**  
Compared to other missionaries whom you have known, how concerned are you with training teaching nationals your knowledge for their development and growth?
- Highly Concerned*      *Better than Average*      *Average*      *Less than Average*      *Unconcerned*



Part 2: Personal Expectations

Directions:

Respond to the following twelve questions based on how you recall your personal expectations regarding this overseas assignment before departure from Canada or the United States and your present experience and situation. Check under "N/A" if the statement is not applicable to you (ie questions 10 and 11).

Scale: Strongly Agree with the statement.  
Tend to Agree with the statement.  
No Opinion, Uncertain or Indifferent.  
Tend to Disagree with the statement.  
Strongly Disagree with the statement.

	N/A	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. As best as I can recall, before departure, I expected my overseas assignment to be a rewarding experience.						
2. Generally speaking, I have found my expectations to have been fulfilled.						
3. Before departure, I felt confident I could prepare myself and my family for an overseas move.						
4. My family has responded by adapting adjusting very acceptably.						
5. Before departure, I was concerned I would have trouble living in another country.						
6. Problems have generally outweighed the good experiences.						
7. Before departure from home, I never doubted I would do well on my overseas assignment.						
8. I am satisfied that I have done well at learning the language, at become friends with the people, and at beginning a ministry that will have effectiveness and impact.						
9. Before going overseas I had distress over the issue of my children's education and possible separation.						
10. My children have adapted well to the schooling situation.						
11. My spouse and I have adapted well to the schooling situation.						
12. There is a general sense of well-being in the way that all areas of family life, personal development, and ministry are fitting together.						
13. I have very positive expectations of the development and growth of the ministry that I am involved with.						

Part 3: Personal Satisfaction

1. With general regard to my relationships with fellow missionaries teammates, I feel:  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
2. With regard to the growth of my relationships with nationals thus far, I feel:  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
3. With regard to the quality of my work experience thus far, I feel  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
4. With regard to the development of my work experience thus far, I feel  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
5. With regard to my on-going progress of learning the language and culture, I feel:  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
6. With regard to my health (physical, emotional, mental) in this culture and ministry, I feel:  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied
7. With regard to my life in general in this culture and ministry, I feel:  
☐ very satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐ very dissatisfied

Part 4: Personal Dimensions

Directions:

We are interested in comparing how missionaries react to and feel about various situations they face in cross-cultural ministry. On the following pages you will find a list of statements which describe individuals to differing degrees. Read each statement, then rate how much you agree with each statement. *Try not to interpret whether you consider the descriptive statement as desirable or undesirable, but what is most true of you.*

Read each of the following 44 statements carefully and respond by checking only one of the five choices on the following scale for each of the statements: Check under "N.A." if the statement is not applicable to you

Scale: Strongly Agree with the statement.  
Tend to Agree with the statement  
No Opinion, Uncertain or Indifferent.  
Tend to Disagree with the statement.  
Strongly Disagree with the statement.

	N A	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
1. For the most part, I consider myself a friendly person.						
2. In a new situation, I am one of the first to act or make suggestions.						
3. When someone expresses a point of view which seems different from what I believe, I usually become interested and ask questions.						
4. In decision making, I take great care to analyze all the factors involved.						



	N/A	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
5. When I make plans, I am almost certain I can make them work.						
6. I prefer spending time with people who see things as I do.						
7. When a task gets overly frustrating, I prefer to move on to other activities rather than persist.						
8. I prefer talking to listening.						
9. I spend adequate time in prayer.						
10. I always make an effort to let others know that I am interested in them.						
11. Most important issues have clear-cut answers.						
12. When making a choice, I prefer to go about it cautiously rather than taking unnecessary risks.						
13. Because of political realities in an overseas situation, it is important to be prudent.						
14. In the past, I have found a number of situations which were hard to cope with.						
15. Whenever I find myself in conflict with others (supervisors, colleagues, domestics, etc.), I generally remain in full control of myself rather than reacting emotionally.						
16. There are many things about foreign countries that I cannot fully accept.						
17. When people express beliefs which seem wrong to me, I usually tell them what I think rather than remaining silent.						
18. I often lack confidence.						
19. Around others, I never hesitate to say what I think.						
20. Given a choice, I prefer to let others take the initiative.						
21. The quality of my spiritual life is more important than the quality of my work.						
22. I believe most people consider me to be basically trustworthy.						
23. Suffering or discomfort can be easily read on another person's face.						
24. When I have to choose between being tactful and being frank, I prefer to be frank.						

	N/A	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
25. I always try to acknowledge and compliment others.						
26. If I feel frustrated, I find it hard to hide my feelings.						
27. When I have to make a decision, I prefer to act quickly.						
28. If given the choice, I prefer to work with others than do it alone.						
29. Persons living in a foreign country should not be required to live by the laws of that country.						
30. Too many new ideas only interfere with what you already know.						
31. People often come to me with their problems.						
32. I am usually able to sense the feelings of others with a fair degree of accuracy.						
33. To be honest, there are a lot of people I know that I don't respect a great deal.						
34. For various reasons, I often find myself in conflict with others.						
35. Compared to others, I am particularly close to my spouse and family.						
36. When I am faced with a problem or new task, one of the first things I do is ask the Holy Spirit to guide me.						
37. In a group undertaking, I am generally not one of the first to suggest a plan of action.						
38. One need not be sensitive to local politics to live and work in a foreign country.						
39. I tend to give up when faced with unduly complicated or tiring situations.						
40. When living in a foreign country, it is critical to be aware of local cultural realities.						
41. Communication with my spouse and family is becoming more difficult.						
42. When I start something, I like to finish it before moving on to something else.						
43. Generally speaking, my spouse and I understand each other.						
44. Generally, I feel confident about my judgment.						



Part 5: Social Dimensions

Directions:

Following are questions covering a variety of skills and activities in your present overseas experience. For each of the questions check one of the five choices on the following scale:

- Scale: Completely  
A Great Deal  
Quite a Bit  
To Some Extent  
Hardly at All

Note: Try not to be influenced by whether you consider these skills and activities desirable or not. State what is true of you at the present time.

	Hardly At All	To Some Extent	Quite a Bit	A Great Deal	Completely
1. Do you feel lonely?					
2. To what extent do you interact with host country people, and have host country individuals as friends?					
3. To what extent do you possess knowledge of a factual nature regarding this country? (Note: factual knowledge includes knowledge of history, geography, politics, religion, current events, etc.).					
4. To what extent do you accept this country and its customs as different but valid for the people of this country?					
5. To what extent do you engage in a variety of enjoyable activities with the national people here?					
6. To what extent do you possess the appropriate education and training for people-related ministry?					
7. To what extent do you feel personally committed to the job you are doing (i.e., interested and involved in your job)?					

8. Do you feel tensions with national believers in any of the following areas?

- Interpersonal relationships
- ☐ yes ☐ no
- Small group meetings
- ☐ yes ☐ no
- Organizational matters
- ☐ yes ☐ no
- Church forms and practice
- ☐ yes ☐ no
- Cultural aesthetics: art, music, rituals
- ☐ yes ☐ no
- Status and social roles (degree of training, position, status, etc.)
- ☐ yes ☐ no
- Theological issues
- ☐ yes ☐ no

10. At what level are your skills for determining the reasons for such conflicts or tensions and solving the problem?
- ☐ highly developed                      ☐ adequately developed                      ☐ underdeveloped
- ☐ at base survival level                      ☐ uncertain

11. Since your arrival have you made close friends with nationals, where you can really share from yourself?
- ☐ yes   ☐ no   ☐ uncertain

12. Which of the following public functions did you attend in the last year ? Please check the appropriate response category.

FUNCTION	CHECK FREQUENCY							
	0	1-2	3-4	5-6	7-8	9-10	11-12	13+
Seasonal events								
Family-related events								
Community social events								
Judicial								
Political								
Religious or quasi-religious								
Healing								
Recreational								
Community work programs								
Everyday public events								

13. Are you now living with, or have you ever lived with a national family?
- ☐ yes   ☐ no
14. If yes, how long did you live with the national family? \_\_\_\_\_
15. I visit in a national home:
- ☐ daily
- ☐ once a week
- ☐ at least once a month
- ☐ less than once a month
16. Do you feel comfortable taking *all the time you need for learning* the culture and language in order to contextualize the Gospel in your area?
- ☐ yes   ☐ no
17. Do you have a “mentor” in the cultural community with whom you have deep rapport and who is giving guidance from a national perspective, teaching you the culture, and helping you solve problems?
- ☐ yes   ☐ no



SECTION VII

SUPPORT STRUCTURES

Directions:

Using the numbers 0 to 5 (as shown on the continuum below), indicate the **extent** of difficulties you experienced during the *first year after arrival* within the country, *during the next 2-3 years*, and what you are experiencing *currently*. Then indicate where you have received support that helped you to cope with each difficulty, whether from *no one* (where you had to work it through on your own), *the mission as an organization*, *from fellow missionaries, nationals* (individuals), *professional counsellors, teachers, anthropologists, etc.* (or written materials—books, notes, etc.), *your supporting church(es)*, or *from your spouse and family*. If you have never faced the problem write 0 in the three **TIME** columns.

Note the following example.

ILLUSTRATION:

DEGREE OF DIFFICULTY: (Use this scale)

0	1	2	3	4	5
not applicable	never or rarely	sometimes	often	frequently	always

SOURCE OF DIFFICULTY	TIME			SUPPORT				
	Arrival 1st yr	Following 2-3 yrs.	Currently	None/Self	Mission Organ.	Missionaries	Nationals	Professionals
14. understanding how nationals act with me.	4	3	1	✓	✓			
36. knowing the functional value of social and cultural activities	5	4	3				✓	
85. personal depression	0	0	0					

Start the first series on the next page.

SERIES I: Living conditions

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5

not                      never or                      sometimes                      often                      frequently                      always

applicable                      rarely

SOURCE OF DIFFICULTY	TIME				SUPPORT				
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church/Family
1. climate									
2. housing									
3. personal security									
4. availability of goods and services									
5. local foods									
6. health									
7. caring for house, clothes, personal effects									
8. need for recreation and sports facilities									
9. adequate finances									
10. sleeping patterns									
11. water quality, availability, volume									
12. need for privacy									



SERIES 2: Cognitive Understanding of the Culture

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or           sometimes           often           frequently           always  
applicable           rarely

SOURCE OF DIFFICULTY	TIME			SUPPORT						
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church	Family
13. understanding how nationals interact with each other										
14. understanding how nationals act with me.										
15. understanding the way nationals think										
16. understanding the culture's worldview and philosophy										
17. understanding cultural customs and manners										
18. understanding cultural values and ideals										
19. understanding local communication patterns and channels										
20. understanding how to dress acceptably in various social situations										
21. understanding how to give and to receive gifts										
22. understanding local politics										
23. understanding national public- social functions										
24. understanding non-verbal communication behaviour										

Missionary Training Questionnaire

SERIES 3: Culture Learning Approaches

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not                      never or                      sometimes                      often                      frequently                      always  
applicable                      rarely

SOURCE OF DIFFICULTY	TIME				SUPPORT					
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church	Family
25. finding a host-culture "mentor" to learn about the culture from										
26. analyzing and organizing facts about the culture to see their relationships										
27. seeing cultural patterns which explain national's behaviour										
28. understanding the motivations and reasons for behaviour										
29. appreciating the aesthetics of the culture: art, manufactured items, dance, music, etc.										
30. internalizing local cultural values and resolving conflicts with personal values										
31. anticipating unique cultural behaviours										
32. initiating relationships										
33. initiating acceptable social behavioral patterns										
34. getting actively involved in most cultural and social functions										
35. knowing the functional value of social and cultural activities										

Missionary Training Questionnaire



SERIES 4: Interpersonal Relationships

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or           sometimes           often           frequently           always  
applicable           rarely

SOURCE OF DIFFICULTY	TIME			SUPPORT						
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church	Family
36. Lack of contact with fellow missionaries										
37. Too much contact with fellow missionaries										
38. Lack of contact with local people										
39. Too much contact with local people										
40. Relationship with team members										
41. Relationship with gov't officials										
42. Relationships with community leaders (local and church)										
43. Relationship with local churches										
44. Relationship with spouse										
45. Relationship with children										
46. Relationships with opposite sex										
47. Relationships with the same sex										
48. Relationship with home constituency (support base)										

SERIES 5. Intercultural Contact

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or   sometimes           often           frequently           always  
applicable   rarely

SOURCE OF DIFFICULTY	TIME			SUPPORT						
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church	Family
49. personal ability to communicate in national language										
50. quality and extent of my social life										
51. number and quality of friendships I have with nationals										
52. number and quality of friend-ships with my own country-people.										
53. amount of independence I experience in this country										
54. comfort with national church goals and aspira-tions										
55. proper balance of time spent with nationals and with my family										



SERIES 6: Work Habits

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or           sometimes           often           frequently           always  
applicable           rarely

SOURCE OF DIFFICULTY	TIME		SUPPORT							
	Arrival 1st yr	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals	Church	Family
56. Lack of motivation to do work										
57. Lack of direction in doing work; objectives/ methods ambiguous										
58. Poor work habits										
59. Insufficient opportunity to use spiritual gifts										
60. Insufficient training for the work										
61. Responsibilities don't fit skills and training I have received.										
62. Lack of evaluation, advice, guidance, counsel- ling by mission leadership										
63. Ability to balance time spent in work, with family, with other people, and by myself.										
64. Difficulties maintaining effective daily schedule										
65. Insufficient leisure time; over-worked										
66. "Politicking" in the mission										
67. Handling personal and mission funds										
68. My role as a woman/man in this culture and in my work										

Missionary Training Questionnaire

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SERIES 7: Ministry

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or   sometimes           often           frequently           always  
applicable   rarely

SOURCE OF DIFFICULTY	TIME			SUPPORT				
	Arrival 1st yr.	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals
69. Maintaining good devotional habits								
70. Problems related to certainty in my own core faith and spiritual life.								
71. Problems relating to my church background vrs. the national church: its forms, traditions, and expectations								
72. Ability to do demographic study for strategic planning								
73. Ability to do ethnographic study								
74. Developing and utilizing creative forms of Gospel evangelism in terms of cultural needs and questions								
75. Selection, preparation, and use of culturally valid visual aids.								
76. Effective follow-up programs and discipleship								
77. Working in team relationships for effective ministry								
78. Analyzing and resolving cross-cultural conflict								
79. Planning and implementing church planting								
80. Discovering and making use of resources: local, governmental agencies, international agencies, churches								



SERIES 8: Affect and Ministry

DEGREE OF DIFFICULTY: (Use this scale)

0                      1                      2                      3                      4                      5  
not           never or           sometimes           often           frequently           always  
applicable           rarely

SOURCE OF DIFFICULTY	TIME			SUPPORT				
	Arrival 1st yr	Following 2 - 3 yrs.	Currently	None/ Self	Mission Organ.	Mission- aries	Nation- als	Profes- sionals
81. How and when to express anger								
82. Personal depression								
83. Anxiety in initiating relationships with nationals								
84. Fear of people								
85. Fear for my family's security								
86. Fear of political upheaval								
87. Discontent with fellow missionaries								
88. Discontent with mission leadership								
89. Discontent with my ministry assignment								
90. Uncertainty knowing how to handle extreme local poverty								
91. Anxiety over personal finances								
92. Physical burnout								
93. Emotional burnout								
94. Spiritual burnout								

Missionary Training Questionnaire

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**Appendix 2:**

**Missionary Colleague-Assessment Questionnaire**

## MISSIONARY COLLEAGUE RATING

Dear Missionary Colleague,

A broad-based study is being undertaken to understand how training affects the capacity of missionaries to become acculturated and to have an effective ministry. The study includes questionnaires to mission administrators, Bible Colleges and Seminaries, pre-field and on-field trainers, and, of course, missionaries themselves. Brazil has been chosen for the field studies, and that's the reason for this questionnaire in your hands.

Missionary training, personal characteristics, spiritual dynamics, and ministry effectiveness are all inter-related. This questionnaire (in conjunction with the others) is intended to help understand the inter-relationship of these components. Please fill out this questionnaire on the missionary who gave it to you. You are identifying characteristics that he or she has in intercultural and ministry interactions.

Please be as sincere and honest as you can. All answers are kept strictly confidential. No one will see the answers that you give except the researcher (who is a teacher and administrator at Prairie Graduate School, Three Hills, Alberta, Canada). Please do **NOT** put your name or the name of the missionary you are evaluating on this questionnaire. *We are not interested so much in who is being evaluated as on what the general results are that will enable educators and trainers to improve training designs and approaches.*

Please DO put down the name of your mission, because this study is doing a comparative analysis of different types of mission training approaches and philosophy. When you are finished please place it in the envelope and seal it. Then place the pre-stamped and pre-addressed envelope in the mail.

*Thank you once again for the time and effort you are expending on this.* The Lord's blessing on your ministry as you serve him here. We trust that the results of this study will be of benefit in future training programs by Colleges and missions around the world.

Delighted in Serving Him,

*John Kayser*  
John Kayser, researcher.



- Name of mission: \_\_\_\_\_
- Please circle or mark an X over the most appropriate response listed below each statement.
- |   |  |
|---|--|
| 1. When confronted by obstacles, the missionary you are assessing remains in full control of himself/herself, is entirely calm and comfortable. (Note: obstacles may include ambiguous situations, conflicts with others, irritating or anxiety-provoking situations, frustrations, etc.)<br>To what extent does this statement describe the person you are rating? | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 2. This individual is invariably one of the first to act, make suggestions, or propose a plan of action.<br>To what extent does this statement describe the person you are rating?  | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 3. This individual demonstrates a capacity to build and maintain relationships. He/she works well with others, is trusting, friendly and cooperative. People come to this person for help with various problems.<br>To what extent does this statement describe the person you are rating?  | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 4. This person demonstrates the ability to respond flexibly to the ideas, beliefs or points of view of others. When faced with different viewpoints, he/she may become curious and ask questions, and is generally open to different viewpoints rather than opinionated.<br>To what extent does this statement describe the person you are rating?                  | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 5. When faced with making a decision, this person first cautiously weighs all the factors involved rather than acting with little thought beforehand.<br>To what extent does this statement describe the person you are rating?   | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 6. This person expresses and demonstrates self confidence with regard to personal goals and judgment. This individual is capable of self assertion in the presence of others.<br>To what extent does this statement describe the person you are rating?   | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 7. This person is a good listener who accurately perceives the needs and feelings of others.<br>To what extent does this statement describe the person you are rating?  | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 8. This person responds to others in a way that demonstrates they are valued. He/she shows interest in others through general attentiveness and appropriate concern. He/she compliments and acknowledges others.<br>To what extent does this statement describe the person you are rating?  | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |
| 9. This person consistently works at a task until its completion, in spite of obstacles or fatigue. He/she does not lose interest or give up.<br>To what extent does this statement describe the person you are rating?   | Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All |

10. This person demonstrates sensitivity to many host country issues and realities, whether cultural, social, or political.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
11. This person is frank and outspoken rather than tactful in his/her dealings with others.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
12. This person demonstrates relaxed friendly communications with the members of his/her natural family.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
13. This person demonstrates consistent spiritual growth and a life of disciplined discipleship.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
14. This person makes efforts to make his or her ministry effective by studying the culture and national church and seeking the advice of Brazilian believers, church leaders, and fellow missionaries.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
15. This person interacts well with Brazilians in a wide variety of situations, and has Brazilian friends.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*

16. This person demonstrates that he/she has the education/training needed for his/her ministry.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
17. This person has become very Brazilian in his/her way of thinking and doing things.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
18. This individual demonstrates deep personal commitment and investment in his/her ministry.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
19. This individual is particularly concerned with training national people. His/her greatest satisfaction appears to be in preparing nationals to take over his/her ministry in time.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
20. This person is concerned that his ministry fit into the local cultural and sociological context.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*
21. This individual is growing in his/her ability to formulate and apply credible and workable ministry strategies and plans.  
To what extent does this statement describe the person you are rating?  
*Completely    A Great Deal    Quite a Bit    To Some Extent    Hardly at All*



**Appendix 3:**  
**National Co-Worker-Rated Questionnaire**

Avaliação de Missionários  
por Nacionais

Introdução:

Está sendo feito um estudo sobre o treinamento e instrução de missionários norte americanos para mel-  
horar a sua eficiência no seu trabalho e ministério junto á cultura brasileira. É importante ouvir dos nossos irmãos brasileiros a fim de aperfeiçoar o treinamento missionário. Por gentileza, responda às seguintes perguntas sobre o missionário que lhe fornece o questionário. Seja o mais sincero e preciso possível. Daí, envie o questionário para o pesquisador no envelope fornecido. O endereço já está no envelope. Favor preencher este formulário sem com-  
entá-lo com ninguém. Não escreva seu nome ou o nome do missionário neste documento. Não estamos interessa-  
dos em identificar QUEM está sendo avaliado. Apenas estamos interessados no QUE você tem a dizer sobre a pessoa que está sendo avaliado. A informação deste ques-  
tionário será guardada em sigílio completo. Os resultados serão juntados com muitos outros formulários e, assim, generalizados a fim de serem estudados. Somente o pesquisador, que é professor numa faculdade bíblica ca-  
nadense, terá acesso à informação.

Agradeço a cooperação dos irmãos brasileiros no  
preenchimento do formulário. Desejamos nos empenhar  
no trabalho do Senhor Jesus junto com os irmãos para a  
glória e a honra do nosso Deus.

John Kayser

John Kayser, pesquisador

Parte I: Ajustamento do Missionário

Instruções:

Circule somente um entre cinco escolhas dadas para cada questão.

1. Ajustamento

Comparado com outros americanos/canadenses que  
você tem conhecido aqui no Brasil, como tem sido a  
adaptação desta pessoa para a vida aqui?

Entre os Mel- Melhor do Menos do Entre os Menos  
hores Adaptados que a Média da Média Adaptados

2. Adaptação à Cultura

Comparado com outros americanos/canadenses que  
você tem conhecido aqui no Brasil, como tem sido a  
identificação desta pessoa com o povo no que se refere  
ao uso de seus costumes culturais, padrões e valores?

Entre os Mel- Melhor do Menos do Entre os Menos  
hores Adaptados que a Média da Média Adaptados

3. Ajustamento da Família

Comparado com outros americanos/canadenses que  
você tem conhecido vivendo no Brasil, como tem esta  
pessoa, seu cônjuge e filhos, se ajustado, como unidade  
familiar, para viver neste país e nesta cultura?

Entre os Mel- Melhor do Menos do Entre os Menos  
hores Ajustados que a Média da Média Ajustados



PARTE II: Adaptação à Cultura

Instruções:

As seguintes sentenças numeradas de 1 a 23 descreve missionários em condições variáveis. Leia cada sentença cuidadosamente, então circule as palavras abaixo que identificam até que ponto a declaração descreve o indivíduo que você está avaliando. A escala usada para cada declaração é:

Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada Tanto

Veja os dois exemplos abaixo para compreensão do que é necessário:

EXEMPLOS:

1. Esta pessoa come polida e corretamente, de acordo com os padrões culturais brasileiros.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada Tanto

2. Esta pessoa gosta de ouvir música brasileira.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada Tanto

4. Eficiência no Ministério

Comparado com outros americanos/canadenses que você tem conhecido, quão efetiva é esta pessoa no desenvolver das suas responsabilidades?

Altamente Efetivo(a) Melhor do que a Média Dentro da Média Menos do que a Média Inefetivo(a)

5. Preocupação com o Desenvolvimento de Nacionais

Comparado com outros missionários que você tem conhecido, quão interessada é esta pessoa no treinamento/ensino de brasileiros para o desenvolvimento e crescimento deles?

Altamente interessado(a) Melhor do que a Média Dentro da Média Menos do que a Média Desinteressado(a)

Agora, por favor, responda às seguintes perguntas.  
Lembre-se, porém, que as respostas são suas. Não sinta que você deve usar as respostas dadas nestes exemplos.

PERGUNTAS:

1. Esta pessoa demonstra ter habilidade de se comunicar efetivamente na linguagem comum de trabalho do povo.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

2. Esta pessoa demonstra habilidade de comunicar-se com pessoas através de métodos outros do que palavras faladas, tais como gestos, apropriado contato visual, apropriado espaço interpessoal, etc.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

3. Este indivíduo compreende as crenças religiosas das pessoas.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

4. Este indivíduo demonstra verdadeiro conhecimento da realidade brasileira, inclusive conhecimentos de história, geografia, política, acontecimentos atuais, etc.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

5. Esta pessoa toma decisões da mesma maneira feita dentro desta cultura.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

6. Esta pessoa segue, social e culturalmente, meios aceitáveis de comunicação para com as autoridades e os líderes de comunidade, para com os homens, as mulheres e as crianças, e para com o rico e o pobre.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto

7. Esta pessoa aprecia a arte, literatura, e tradições desta cultura.  
Até que ponto esta declaração descreve a pessoa que você está avaliando?

Completamente Bastante Um Bom Um Pouco Quase Nada  
Tanto



8. Esta pessoa tem boas-maneiras sociais. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
9. Esta pessoa toma tempo com o povo local estudando maneiras culturalmente aceitáveis de fazer coisas. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
10. Esta pessoa segue padrões culturalmente aceitáveis para resolver conflitos. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
11. Esta pessoa segue padrões culturais de vestuário, alimento, moradia e transporte do povo entre o qual ele ou ela trabalha. Até que ponto esta declaração descreve a pessoa que você está avaliando?.	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
12. Esta pessoa tem um relacionamento amigável e brin- calhão com amigos brasileiros. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
13. Esta pessoa participa em cerimônias tradicionais com amigos brasileiros. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
14. Esta pessoa é capaz de adaptar uma razão para as atitudes e valores dos brasileiros. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				
15. Esta pessoa trabalha bem com brasileiros líderes de igreja. Até que ponto esta declaração descreve a pessoa que você está avaliando?	<i>Completamente</i>	<i>Bastante</i>	<i>Um Bom</i>	<i>Um Pouco</i>	<i>Quase Nada</i>
	<i>Tanto</i>				

16. Esta pessoa pode fazer efetivas apresentações da verdade Bíblica (verbalmente, ou por meios visuais, drama música) que se adapta aos padrões de pensamento desta cultura. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
17. Esta pessoa empreende esforços para fazer seu ministério efetivo através do estudo da cultura e da igreja nacional e através da procura do conselho de crentes e líderes de igreja brasileiros. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
18. Esta pessoa se relaciona bem com brasileiros em uma ampla variedade de situações, e tem amigos brasileiros. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
19. Esta pessoa não deprecia ou “põe abaixo” o Brasil e seus costumes. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
20. Este indivíduo é particularmente interessado com o treinamento de brasileiros. É visível que a sua maior satisfação é preparar nacionais para um dia continuar seu ministério. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
21. Esta pessoa está interessada que seu ministério se enquadre dentro do contexto cultural e sociológico. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
22. Esta pessoa mostra, por suas ações, que ele/ela está feliz em seu trabalho e ministério. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				
23. Esta pessoa é vista como um indivíduo bom e “temente a Deus” pelo povo da comunidade. Até que ponto esta declaração descreve a pessoa que você está avaliando?	Completamente	Bastante	Um Bom	Um Pouco	Quase Nada
	Tanto				



## BRAZILIAN RATINGS ON MISSIONARIES

**Introduction:** (*Translation of the Brazilian text*) A study is being made in how to train and instruct missionaries to improve their effectiveness in their work and ministry within the Brazilian culture. It is important that we hear from our Brazilian brothers so that we might work at perfecting missionary training. Please answer the following questions about the missionary who gives this questionnaire to you. Be as sincere and exact as possible. Then send the questionnaire to the researcher in the provided envelope. It is already self-addressed. Please complete this form without discussing it with anyone. Do not write your name or the name of the missionary on the form. We are not interested in identifying who is being evaluated. We are only interested in what you have to say about the person being evaluated. The information of this questionnaire will be kept in strictest confidence. The results will be put together with that of many other forms, and, in this way, generalized. Only the researcher, who is a teacher in a Canadian Bible College, will have access to the information.

I want to thank you, Brazilian brothers, for filling out the questionnaire. We desire to apply ourselves to the work of the Lord Jesus along with you to the glory and honor of God.

John Kayser, researcher.

### Part I: Missionary Adjustment and Effectiveness

**Instructions:** Circle only one of the five choices given for each question.

**1. Adjustment:**

Compared to other American/Canadians in this country whom you have known, how well has this person adapted to living here?

<i>Among the Best Adapted</i>	<i>Better than Average</i>	<i>Average</i>	<i>Less than Average</i>	<i>Among the Least Adapted</i>
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**2. Acculturation:**

Compared to other American/Canadians in this country whom you have known, how well has this person identified with the people in using their cultural ways, patterns, and values?

<i>Among the Best Adapted</i>	<i>Better than Average</i>	<i>Average</i>	<i>Less than Average</i>	<i>Among the Least Adapted</i>
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**3. Family Adjustment:**

Compared to other Americans/Canadians living in this country whom you have known, how well has this person, his/her spouse, and children adapted as a family unit to living in this country and culture?

<i>Among the Best Adjusted</i>	<i>Better than Average</i>	<i>Average</i>	<i>Less than Average</i>	<i>Among the Least Adjusted</i>
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**4. Ministry Effectiveness:**

Compared to other American/Canadians whom you have known, how effective is this person at handling his/her ministry responsibilities?

<i>Highly Effective</i>	<i>Better than Average</i>	<i>Average</i>	<i>Less than Average</i>	<i>Ineffective</i>
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**5. Concern with Developing Nationals:**

Compared to other missionaries whom you have known, how concerned is this person with training/teaching nationals his/her knowledge for their development and growth?

*Highly  
Concerned*      *Better  
than Average*      *Average*      *Less  
than Average*      *Unconcerned*

**PART II: Acculturation**

**Instructions:**

The following sentences numbered 1-25 describe missionaries to varying degrees. Read each sentence carefully, then circle the words below that identify the extent to which the statement describes the individual you are evaluating. The scale used for each statement is:

To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*

See the two examples below for understanding what is needed.

**EXAMPLES:**

1. This person eats politely and correctly according to Brazilian cultural standards.  
To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*

2. This person enjoys listening to Brazilian music.  
To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*

Now, please answer the following questions. Remember, however, that the answers are yours. Do not feel you must use the answers given in these examples.

**QUESTIONNAIRE:**

1. This person demonstrates the ability to communicate effectively in the common working language of the people.  
To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*

2. This person demonstrates the ability to communicate with people through methods other than the spoken word, such as gestures, appropriate eye contact, appropriate interpersonal space, etc.  
To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*

3. This individual understands the religious beliefs of the people.  
To what extent does this statement describe the person you are rating?

*Completely*      *A Great Deal*      *Quite a Bit*      *To Some Extent*      *Hardly at All*



4. This individual demonstrates knowledge of a factual nature regarding this country--including knowledge of history, geography, politics, current affairs, etc.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
5. This person makes use of the ways that decisions are made within this culture.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
6. This person follows socially and culturally accepted ways of communicating to authorities and community leaders, to men, women, and children, and to the wealthy and the poor.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
7. This person enjoys the art, literature, and traditions of this culture.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
8. This person has good social manners.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
9. This person spends time with local people studying cultural ways of doing things.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
10. This person follows culturally acceptable patterns for resolving conflict.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
11. This person follows cultural patterns of dress, foods, housing and transportation of the people he or she is working among.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
12. This person has joking or teasing relationships with Brazilian friends.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
13. This person participates in traditional ceremonies with Brazilian friends.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*
14. This person can adapt an argument to the attitudes and values of Brazilians.  
To what extent does this statement describe the person you are rating?
- Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

15. This person works well with Brazilian church leaders.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

16. This person can make effective presentations of Biblical truth (verbally or with visuals, drama, music) that fit the thought-patterns of this culture.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

17. This person makes efforts to make his or her ministry effective by studying the culture and national church and seeking the advice of Brazilian believers and church leaders.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

18. This person interacts well with Brazilians in a wide variety of situations, and has Brazilian friends.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

19. This person does not disparage or "put down" Brazil and its customs.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

20. This individual is particularly concerned with training national people. His or her greatest satisfaction appears to be in preparing nationals to take over his or her ministry in time.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

21. This person is concerned that his ministry fit into the local cultural and sociological context.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

22. This person shows by his/her actions that he/she is happy in his/her work and ministry.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*

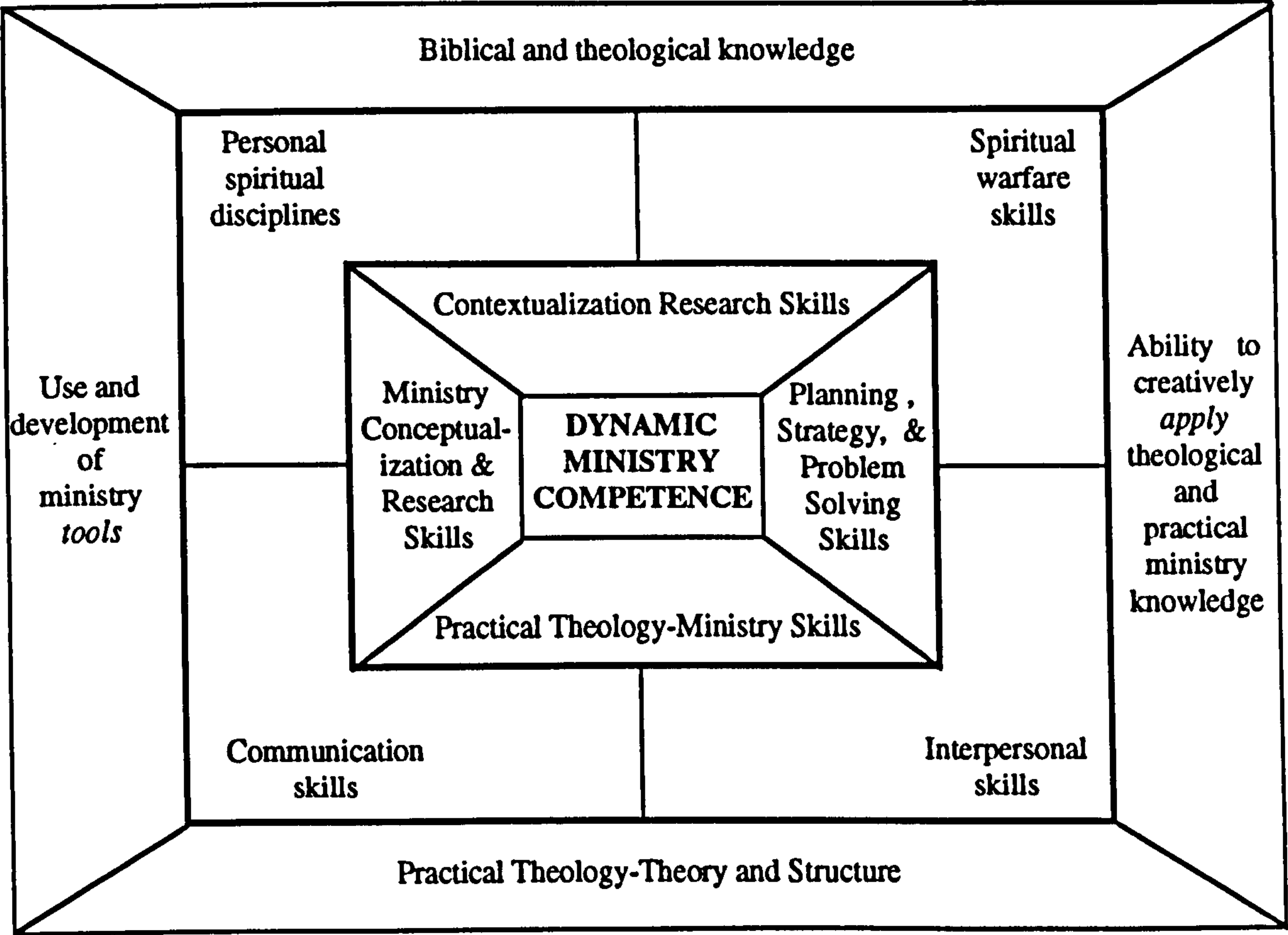
23. This person is perceived as a good and "godly" person by the people in the community.

To what extent does this statement describe the person you are rating?

*Completely      A Great Deal      Quite a Bit      To Some Extent      Hardly at All*



Appendix 4: Missiological Education--Three Level Model



1. The objective of training (center of diagram) is assumed to be dynamic ministry competence.
2. The outermost circle is predominantly academic and includes cognitive learning material (theories, structures, tools, and applications) from biblical, systematic, and practical theologies. It will be assumed here that practical theology includes psychology, sociology, anthropology, communication, education, missiology, ecclesiology (especially biblical not merely historical Church function), etc., *as these subjects relate theoretically and practically to field ministry.*
3. Training in the second circle focuses more on personal character development and personal interpersonal skills which are so critical for effective ministry: spiritual dynamics, prayer warfare, ability to relate confidently and warmly with others, ability to communicate effectively, etc. Development in these areas is likely to occur both within the academic and the experiential training contexts. Note that this circle bridges the first and third circles--the academic and field ministry levels. For example, an individual who has much knowledge of practical theology but poor interpersonal and communication skills will be ineffective in ministry.
3. The third circle is primarily developed through field training: 1) development of ministry skills, 2) learning how to do research of the ministry context, 3) correlating that research to the broader realm of academic research studies in Church growth, anthropology, sociology, counselling, etc., and 4) working through planning strategies for ministry as well as learning problem solving processes.
4. The student is an active agent in all of this process. Professors, media, books and other such resources, professionals, experienced men and women in ministry, and the social context all become learning resources. However, the student must be trained in making use of these resources. Educational institutions generally have done well in training students how to make use of academic resources but not how to make use of human and social resources.

### Appendix 5: Varimax Oblique Rotated Factor Matrices of Factor Analyses on Dependent Variables

Oblique Solution Primary Pattern Matrix-Orthotran/Varimax  
Self-Report General *Dependent* Variables  
**General Adjustment Questions**

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Pers.Adj.	.788	-.077	.182	-.076	.249	-.006	.145	-.128
Accult.	.815	-2.87 <sup>4</sup>	-.027	.098	-.011	-.003	.014	.15
Fam.Adj.	.846	.087	-.124	.186	.122	-.31	.077	.099
Min.Eff.	.846	-.007	.067	-.166	-.104	.134	-.039	-.169
Dev.Nat.	.572	-.115	.04	2.166 <sup>4</sup>	-.409	.38	-.219	.298
Miss.Relat.	-.169	.869	-.006	-.109	.074	.157	-.177	-.246
Nat.Relate	.12	.262	.233	.412	.029	.205	-.088	-.143
WorkQual.	.068	-.082	.848	.003	.199	.012	-.058	-.112
WorkDev.	.049	.108	.921	-.105	-.071	.013	.086	-.001
Lang.Lrn.	-.037	-.002	.634	.063	-.012	.01	.013	.39
Health	.094	.767	.089	.015	-.15	.044	.009	.244
GeneralLife	.143	.414	.137	.271	.525	-.168	-.119	-.279
Lonely	.058	-.14	.039	.076	-.02	.12	1.003	-.271
Interact	.059	.075	-.043	.361	.026	.676	.047	.024
KnowCountr	.056	-.163	.061	.013	.113	.213	-.245	.764
AcceptCo...	.001	-.047	-.055	-.197	.838	.133	-.011	.116
EnjoyAct...	-.028	.122	.07	-.116	.168	.831	.155	.134
Committ...	-.059	-.007	.361	.227	.549	.006	-.068	-.002
VisitNat.	.007	-.078	-.019	.912	-.077	.022	.076	.071

Oblique Primary Pattern Matrix/Orthotran-Varimax  
**Acculturation: Factual Knowledge**

Variables	Factor 1	Factor 2	Factor 3
Fact-Trad.	.217	.876	-.158
Fact-Beliefs	.521	.685	-.255
Fact-Soc.	-.113	.197	.761
Fact-Art	-.235	.752	.334
Fact-Rituals	.023	.181	.746
Fact-Kin	.156	-.008	.772
Fact-Comm.	-.052	.181	.759
Fact-History	.124	.766	-.017
Fact-Material	.269	.026	.64
Fact-Econ.	.756	.005	.105
Fact-Authori...	1.006	-.155	.006
Fact-Success	.632	-.258	.47



**Oblique Primary Pattern Matrix/Orthotran-Varimax  
Acculturation: Understanding**

Variables	Factor 1	Factor 2	Factor 3
U-Tradations	.746	.047	.083
U-Religious Belief	.714	.284	-.103
U-Socialization	.864	-.013	.024
U-Art/Literature	.991	-.165	-.076
U-Rituals	.84	-.088	.131
U-Kinship	.71	.168	.026
U-Comm.	.43	-.002	.532
U-History	-.13	-.012	1.024
U-Material	.103	.325	.504
U-Econ.	-.123	1.004	-.001
U-Authority	.206	.775	-.03

**Oblique Primary Pattern Matrix/Orthotran-Varimax  
Acculturation: Insight**

Variables	Factor 1	Factor 2	Factor 3
Insight-Character	-.047	.294	.707
Insight-Values	.007	.02	.891
Insight-Worldview	-.097	.087	.889
Insight-Ethos	.897	-.006	.003
Insight-Social.Proc	.822	-.047	.13
Insight-Kinship	.774	.418	-.177
Insight-ComEntry	.077	.901	-.003
Insight-Author.Str.	.207	.786	-.001
Insight-Comm.Ch.	.196	.448	.361
Insight-CoreSoc.	-.011	.013	.834

**Oblique Primary Pattern Matrix/Orthotran-Varimax  
Acculturation: Appreciation**

Variable	Factor 1	Factor 2	Factor 3	Factor 4
Apprec.Music	.009	.871	-.098	.141
Apprec.Art	-.048	.914	.099	-.066
Apprec.Mann...	.008	.06	.885	-.17
Apprec.Child...	.454	.064	.553	-.224
Apprec.Dress	-.095	.074	.721	.212
Apprec.Lang.	-.002	.219	-.067	.849
Apprec.Auth...	.874	.006	-.095	.189
Apprec.Roles	.923	-.008	.004	-.075
Apprec.Honor	.26	-.268	.505	.349
Apprec.Trad.	.054	.207	.539	.207

Oblique Primary Pattern Matrix/Orthotran-Varimax  
Acculturation: Identify With and Have Accepted

Variable	Factor 1	Factor 2	Factor 3	Factor 4
Accept/Conf...	-.157	.15	.866	-.051
Accept/Com...	.411	-.158	.678	.089
Accept/Media	.257	-.018	.683	.194
Accept/Auth...	.037	.28	.414	.544
Accept/Roles	-.054	.259	.002	.898
Accept/Honor	.005	.723	-.025	.43
Accept/Trad...	.081	.859	.009	.123
Accept/Social	.39	.435	.218	.196
Accept/Dress	.901	-.01	-.057	.01
Accept/App...	.725	.2	.126	-.102

Oblique Primary Pattern Matrix/Orthotran-Varimax  
Acculturation: Know How and Enjoy

Variable	Factor 1	Factor 2	Factor 3
Enjoy/Polite	.909	.035	-.003
Enjoy/Custo...	.768	-.001	.223
Enjoy/Joking	.528	.221	.227
Enjoy/Cere...	.444	.672	-.319
Enjoy/Recre...	-.04	.859	.034
Enjoy/Play	-.495	1.033	.265
Enjoy/Mento...	.378	.556	-.035
Enjoy/Hobby	.125	-.095	.922

Oblique Solution Primary Pattern Matrix-Orthotran/Varimax  
Intercultural Ministry Skills

Variable	Factor 1	Factor 2	Factor 3
AdaptArgue	.13	-.027	.806
N-V.Comm	.358	-.001	.566
DecisionMak.	.613	-.06	.253
Homog.Units	.698	-.293	.367
Fam.Link.	.353	-.185	.600
NewConcepts	-.297	.164	.945
Ident.Ldrs.	-.071	.201	.763
ValueChange	-.121	.082	.877
FeltNeeds	.211	.200	.575
EqualInteract.	.903	.152	-.176
Comfort	.847	.170	-.128
IntegrateTruth	.334	.484	-.006
Bib.Ch.Struct.	.228	.560	.108
Workw/Nats.	.347	.529	-.078
MoniterMin.	.208	.568	.024
Comm.Biblical	.154	.545	.271
App.Cult.Defs.	.536	.287	.118
Nats.FitWork	-.005	.563	.354
UseAnalogies	.070	.597	.249
Dev.Nat.Ldrs.	-.043	.942	-.139
ChurchDev.	-.290	.927	-.001



Orthogonal Transformation Solution-Orthotran/Varimax  
Missionary Colleague-Rated *Dependent* Variables  
Intercultural Ministry Skills  
Personal Ministry Statements (Questions 14-21)

Variable	Factor 1	Factor 2	Factor 3	Factor 4
StudyCult.	.768	.185	-.079	.108
InteractBraz.	.413	.221	-.025	.498
Ed.Min.	.004	.061	.947	.034
Braz.Ways	-.01	-.013	.046	.972
Commit.Min	-.087	.899	5.388E-5	.081
TrainNats.	.827	-.209	.175	.034
Min.Fit.Cult	.618	.467	.031	-.041
Form.Strats.	.162	.575	.381	-.014

Oblique Solution Primary Pattern Matrix--Orthotran/Varimax  
National-Rated *Dependent* Variables (Set One)  
Adjustment and Effectiveness (Section 1: Q.1-4)

Variable	Factor 1	Factor 2	Factor 3
Adjust.	.875	.159	-.032
Accult.	.862	-.097	.015
Fam.Adj.	.674	-.001	.144
Min.Eff.	.141	.002	.905
Happy	.195	.918	-.218
Godly	-.19	.83	.328

Oblique Solution Primary Pattern Matrix--Orthotran/Varimax  
National-Rated *Dependent* Variables (Set Two)  
Ministry Effectiveness (Sect.1.Q.5; Sect.2.Q.1-21)

Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Devel.Nats.	.003	-.144	-.096	.044	.924	.007	-.035	.025	.187
Verb.Comm.	-.099	-.001	-.059	-.002	.413	.785	.185	-.156	-.013
N-V Comm.	.14	.49	.178	-.027	-.066	.133	.43	-.324	.242
Undst.Relig.	.145	.109	-.067	-.212	.077	.271	-.061	.673	.09
KnowFacts	.334	.183	.269	.041	-.25	.622	-.265	.138	.002
Cult.Decis.	.259	.137	-.037	.36	-.365	.187	.072	.32	.162
Comm.w/All	-.047	.733	-.214	.093	.136	-.13	.038	.222	.003
EnjoyArt	.049	.76	-.004	.252	.063	-.048	-.333	.131	.073
GoodMann.	-.17	.729	.072	.016	.165	.199	.127	.009	-.278
StudyCult.	.853	.154	-.209	-.052	-.111	-.039	.144	.037	.027
ResolveConf	.133	.179	-.14	.086	.071	-.024	.75	-.024	-.115
Liv.Patterns	.215	.186	.151	-.04	.092	-.054	-.091	-.015	.749
JokingRelat	-.28	.008	.112	-.023	-.053	.022	.476	.518	.353
Trad.Cerem.	-.027	-.031	.82	.182	.15	-.108	.076	-.023	.062
AdaptArgue	.482	.14	-.016	.046	.505	.174	-.063	-.219	.033
WorkCh.Ldr	.113	.331	.128	.002	.217	-.271	-.153	.593	-.072
ThoughtPatt.	.276	.416	.158	-.036	.356	-.098	.283	-.232	-.065
SeeksAdvice	.688	.108	.133	.088	.186	-.012	-.028	-.05	-.144
Braz.Friends	.088	-.088	.229	.127	.129	.023	.288	.421	-.049
NotDisparag	-.308	.028	-.106	1.022	.087	.064	-.004	6.131 <sup>5</sup>	.026
TrainNats.	.37	-.26	.034	.153	.39	.087	.14	.281	-.144
Fit.Context	.574	-.142	.055	.494	-.137	-.047	.138	.084	.001

Appendix 6: Varimax Rotated Factor Matrices of Independent Variables: Personal Dimensions  
Oblique Solution Primary Pattern Matrix/Orthotran-Varimax  
Self-Rated Independent Variables

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11	Factor 12	Factor 13	Factor 14	Factor 15	Factor 16	Factor 17	Factor 18
Friendly	-.018	.008	-.397	.265	-.329	-.021	-.109	-.084	.053	.067	-.042	-.112	.268	.220	.419	.066	.177	-.014
1stAct	.039	.366	-.071	.204	.065	.103	-.140	-.188	-.555	.058	.179	.021	-.037	-.045	.310	.083	-.069	.010
AskQuest.	.033	.436	.016	.588	.169	-.003	.006	-.186	.156	.069	-.064	-.004	.012	.049	.110	.156	-.146	-.310
Analyze	.055	-.156	.069	.836	-.063	.068	-.033	.112	-.032	-.003	-.326 <sup>4</sup>	.042	-.023	-.004	-.079	.034	-.040	.140
PlansWork	.092	.080	.122	-.087	-.094	.707	-.126	.084	-.096	.038	.013	-.033	.088	.119	.091	-.156	.119	.262
PreferSamePeopl	.093	.092	.003	2.835 <sup>5</sup>	.064	.034	.141	.800	.011	-.099	.072	.016	.023	-.030	.040	.016	.022	.068
NotPersist	.024	.051	-.001	.101	.038	-.178	-.061	.073	-.061	.058	.693	.049	-.049	-.142	-.088	.065	.174	-.225
PreferTalk	-.111	.792	.057	-.137	-.193	.048	.181	-.104	-.043	-.212	.281	-.018	.026	-.071	.106	.06	.006	.129
ShowInterestOth	-.081	.003	-.321	.046	.170	-.100	.233	-.080	-.152	.111	-.193	-.221	-.14	.603	.076	.07	-.119	.211
IssuesClear	-.050	.200	.062	-.167	.129	.102	-.153	-.327	.053	.319	.253	.229	.305	.023	-.430	.106	-.161	-.055
Cautious	-.210	-.221	.188	.266	-.218	-.114	-.22	.513	.207	.103	.084	.153	.166	.033	-.017	.059	.006	.082
Prudent	.059	-.001	.046	.001	-.002	-.026	.032	-.004	.096	-.010	-.062	-.081	.87	.041	.086	.095	-.059	.059
HardCope	-.049	-.130	.179	-.104	.077	.081	.065	.102	.019	.088	-.034	.233	.113	-.063	.748	-.088	-.030	-.025
Self-Control	-.034	-.027	.135	.155	-.098	.067	-.726	-.024	-.025	-.016	.109	-.082	.048	.03	-.099	.042	-.091	.050
RejectForeign	.129	-.036	.816	-.041	.031	-.076	-.181	.141	-.131	-.034	.004	.032	.07	.063	.182	.04	-.098	-.060
NotSilent	.007	.758	.078	.054	.084	-.116	-.199	.102	.028	-.054	-.023	-.073	.002	-.040	-.162	-.117	-.114	.066
LackConf.	-.006	-.196	.134	.188	-.139	-.030	.636	.205	.142	.135	.222	-.035	.152	.106	-.092	-.073	-.019	-.171
SayWhatThink	.114	.610	-.089	.009	-.060	-.089	-.223	.129	-.115	.250	-.070	.103	-.161	.131	-.128	-.266	.253	-.022
OthersInitiate	.064	-.049	-.091	.024	-.117	.202	.049	.118	.789	.096	.187	-.115	.046	-.003	.115	.079	-.233	.049
Trustworthy	.153	-.320	.252	.074	-.245	.204	.189	.134	-.250	.109	-.060	-.061	.249	.023	-.155	.002	-.043	.184
ReadOthers	1.365 <sup>4</sup>	.014	.079	.050	.015	-.002	-.171	.126	.073	.074	-.171	.060	.041	-.015	-.012	.235	-.035	.760
Frank	-.168	.502	.075	.060	4.076 <sup>4</sup>	-.074	.245	.090	-.235	.047	-.217	.426	.064	-.164	.014	-.088	.060	-.241
ComplimentOth	.080	-.031	.060	.034	.077	.188	-.046	.020	.001	.031	-.060	.125	.071	.808	-.075	.014	.058	-.106
NotHideFeelings	-.046	.012	.050	.012	-.060	.060	.018	.005	.016	-.009	.081	.868	-.138	.053	.128	.034	-.028	.063
ActQuickly	.098	.503	-.053	-.241	.176	.209	.156	-.094	-.217	.050	-.033	.132	.080	.056	-.214	.091	.277	-.202
WorkW/Others	-.039	-.131	-.069	.097	-.071	-.017	-.088	.089	-.027	-.024	.015	.003	.120	.068	-.100	.772	.183	.164
ObeyLaws	-.107	-.014	-.067	.020	.835	-.001	.005	.007	-.061	-.038	.060	-.076	.008	.103	.010	-.048	.074	.005
IdeasInterfere	.082	.047	.137	-.057	.250	-.186	.146	-.226	.221	-.031	.147	.186	-.330	.200	.203	.141	.164	.207
CounselProblem	.100	.065	-.006	.257	-.003	-.087	.013	-.435	-.056	-.142	.036	.397	.197	-.004	-.19	-.283	.001	.082
SenseFeelings	.037	-.059	-.340	.296	.288	.140	.021	-.149	-.240	-.026	.116	.112	.160	-.033	-.041	-.275	.065	.410
Don'tRespectOth	-.023	.058	.691	.141	-.285	.183	.134	-.147	.155	.189	.007	.046	.040	-.11	-.057	-.112	.136	.196
Conflict	.037	.23	.498	.223	.277	.116	.184	-.055	-.052	.165	-.043	-.006	-.144	-.451	.037	-.07	.190	-.036
Close to Spouse	.574	.029	.163	.197	.091	-.109	.336	-.137	-.045	-.301	.073	.053	-.006	.243	.017	.058	-.134	.128
Not1stPlan	.036	-.022	2.15 <sup>4</sup>	.070	.098	-.283	.029	-.103	.720	-.050	-.153	.127	.068	-.116	-.005	-.078	.210	-.005
SensitivePolitic	-.052	.076	-.016	-.092	.080	.017	.084	.066	-.047	-.012	.110	-.002	-.077	-.06	.022	.190	.742	-.009
GiveUp	-.023	.143	-.062	-.252	.323	-.091	.151	.142	.100	.081	.497	.128	-.102	-.125	.020	-.058	-.018	.137
AwareRealities	.346	.136	-.197	.017	-.104	.019	.056	.091	-.158	.147	-.291	.231	.076	-.267	-.023	.232	-.365	.056
Comm.Difficult	-.885	.082	-.023	.070	-.070	.007	.196	-.101	-.057	-.086	.154	.052	-.079	.043	-.050	.082	-.086	.071
Finish Things	.050	-.060	.091	.018	-.045	-.046	.078	-.065	.003	.875	.045	-.028	3.018 <sup>4</sup>	.036	.051	-.005	-.028	.052
Unders.Spouse	.809	.026	.071	.097	-.239	.134	.100	-.019	.059	.049	.164	-.019	-.032	.019	-.070	.003	-.068	.026
Conf.Judgement	.023	-.123	-.012	.137	.064	.851	-.006	-.044	.054	-.084	-.156	.076	-.085	.003	-.013	.099	-.063	-.161



**Appendix 7: Varimax Rotated Factor Matrices of Other Independent Variables**

Orthogonal Transformation Solution-Varimax  
**Missionary Colleague-Rated *Independent Variables***  
**Personal Dimensions Inventory**

<b>Variable</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>	<b>Factor 6</b>
Control	.257	.527	-.215	.541	.226	.264
1st to Act	.168	.869	.105	-.065	-.05	.061
BuildRelat.	.738	.208	.04	.171	.11	.243
Flexible	.57	.243	.271	.5	.029	.008
Cautious	.174	.059	.901	.104	.009	.149
Self-Confident	.152	.861	.03	-.094	.189	.121
Listener	.801	.204	.203	.218	.059	.032
ShowsInterest	.869	.065	.011	-.124	.261	.125
CompletesWork	-.167	.251	.34	-.014	.58	.499
Sensitive	.293	.118	.122	-.018	.009	.883
Frank	-.068	.232	-.12	-.852	.055	.067
Comm.Family	.399	.051	-.084	-.009	.803	-.035
Spir.Growth	.314	.468	.376	.105	.407	.039

Oblique Solution Primary Pattern Matrix/Orthotran-Varimax  
**Self-Rated *Independent Variables***  
**Missionary Development Combined Scale**

<b>Variable</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>	<b>Factor 6</b>	<b>Factor 7</b>	<b>Factor 8</b>	<b>Factor 9</b>
Intellect.Devel.	.091	.126	-.054	-.054	.812	-.161	-.074	.047	.082
Spir.Develop	.034	.448	-.191	-.202	.152	-.245	.530	-.225	-.233
Emot.Develop	-.073	.259	.222	.288	.121	-.071	.317	.188	.316
Interperson.Dev	.007	-.100	.896	-.149	.056	-.195	.046	-.024	.100
Marital Develop	.025	.136	.821	.093	-.111	.303	-.001	-.009	-.117
Child.Relate.	-.058	.839	-.041	.115	-.168	.263	.053	.097	-.066
Comm.Skills	-.069	.709	.113	-.105	.267	-.198	-.244	.041	.133
Self-Confidence	.114	.342	.059	-.006	.051	-.048	.127	.588	.077
Independ/Contr.	-.013	-.042	-.042	-.063	-.001	-.003	-.010	.940	-.079
Polit.Opinions	-.001	.020	.002	.045	-.018	.065	-.005	-.042	.914
Goals	-.041	.004	.095	-.034	.002	.886	-.084	.001	.016
Progress	.198	.144	-.14	-.216	-.100	.582	.276	-.127	.111
HaveDoneWell	.058	.251	-.068	-.462	.117	-.046	.517	-.087	.106
Child.AdaptSch	.902	-.045	-.004	-.100	.043	-.142	.034	-.002	-.014
SpouseAdaptSc	.892	-.027	.038	.120	.021	.145	.014	.033	-.004
SenseWellBeing	.210	.023	.091	.164	-.064	.106	.700	.105	-.026
Pos.Expectation	-.028	-.179	.103	-.028	.008	.006	.843	.095	.039
Cont.Education	-.070	-.230	-.020	.094	.703	.319	.467	.054	-.127
Time To Learn	.014	.039	-.100	.872	-.056	-.116	.096	-.047	.160
Nat. Mentor	.055	.093	.091	.511	.478	.022	-.273	-.183	-.291

Orthogonal Matrix-Orthotran/Varimax  
Self-Rated *Independent Variables*  
Ministry Skills Growth Scale

	Factor 1	Factor 2	Factor 3
Bib/Th.Knowledge	.879	.121	.152
AbilityApplySkills	.841	.267	.068
DevelopGiftings	.752	.128	.411
WorkHarmoniously	.317	.152	.867
Ability To Assess	.442	.711	.11
Research Wk./Others	.324	.813	.167
Form Wk. Strategies	.184	.604	.598

Oblique Solution Primary Pattern Matrix-Orthotran/Varimax  
Self-Report *Independent Variables*  
Ideal Spiritual Values

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
Dep.on God	-.29	.457	.154	.497	-.173	-.105	.448	.191	.143	-.087
Burden	.026	.177	.011	.021	.068	-.032	-.1	.008	.781	.100
Confidence	-.079	.204	.019	.775	.018	.187	-.017	-.153	-.115	.143
Holiness	.043	.623	.169	-.113	.118	1.660 <sup>4</sup>	-.058	.035	.286	.274
Justice	-.02	.061	.059	-.037	.03	.13	.102	.929	-.031	.018
Purity	.17	.763	-.007	.238	-.028	.042	.002	-.048	.013	-.084
Disputes	-.11	.034	.002	.086	.037	.927	-.02	.125	.04	.037
Face Persec.	.004	-3.09 <sup>4</sup>	.038	.015	.903	.036	.186	.035	.018	-.007
Self-Cont.	.563	.501	-.101	-.185	-.073	.019	.071	.093	-.038	-.153
KnowWord	.915	.037	-.218	-.136	-.027	.003	-.185	.083	.143	-.116
Persever.	.027	-.032	-.055	.124	-.014	.005	-.007	.03	.114	.882
Love	.679	-.274	-.142	.518	.088	-.054	-.172	.059	.13	.022
Prayer	.818	-.14	-.167	.256	-.095	-.131	-.057	.026	.205	-.051
Sp.Gifts	.386	-.196	.249	.365	.131	-.185	-.117	.227	.011	.031
Sp.Power	.817	.063	.074	.066	.196	-.088	-.164	-.079	-.013	-.014
Sp.Walk	.87	.077	.084	.019	.147	.029	-.029	-.085	-.039	-.006
Sp.Fruit	.54	.266	.179	-.01	.121	.035	.178	-.101	-.083	.256
Conf.Sin	.405	.168	.27	.012	.038	.184	.119	-.032	-.255	.334
Conf.Fault	.139	-.058	.149	-.118	-.162	.25	.435	-.114	.567	-.044
Devotion	.681	.007	.064	-.031	-.367	-.116	.031	.07	-.046	.204
Obedience	.157	-.062	-.002	.002	-.235	.043	-.843	-.103	.046	-.06
Fellowship	.15	-.055	.616	.325	-.111	.222	.29	.016	.026	-.055
Team Min.	-.106	.12	.917	-.072	.049	-.073	-.067	.05	.068	2.517 <sup>4</sup>
Sp.Warfare	.441	-.015	.197	-.171	-.207	.147	.237	-.024	.024	.292



**Oblique Solution Primary Pattern Matrix-Orthotran/Varimax**  
**Self-Report *Independent* Variables**  
**Real Spiritual Values**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
PrayerAdeq.	-.381	-.141	-.209	.131	.550	-.031	.204	-.003	.505	.215
Spir.LifeImp	.032	-.025	-.003	-.013	.024	.882	.066	.101	-.055	-.123
AskHolySpir	.036	.02	.033	-.112	-.192	-2.27 <sup>4</sup>	-.034	-.077	1.032	-.053
Dep.onGod	-.109	.16	.045	.832	.066	.025	-.248	.092	.079	-.37
Burden	.575	-.208	-.019	-.115	.186	-.163	.44	.258	.114	-.362
Confidence	.159	-.014	-.298	.944	-.105	.006	.188	-.033	-.145	.078
Holiness	-.016	.042	.044	-.194	.014	-.115	.073	.072	-.059	.846
Purity	-.013	.212	.776	.005	-.234	.094	.079	-.008	.046	.026
Disputes	-.067	.911	.128	.035	-.055	-.038	.047	-.081	-.044	.006
FacePersec.	.417	-.105	.239	.203	-.357	.304	-.029	-.253	.078	.292
SelfControl	-.459	-.426	.663	.439	.088	-.015	.137	-.138	-.16	-.071
KnowWord	-.039	.304	-.136	.297	.325	.058	-.025	.494	.023	-.02
PrayerAver.	.188	-.003	-.007	-.112	1.018	.032	-.049	-.188	-.262	-.051
Sp.Gifts	-.058	-.105	.015	-.047	-.238	.064	.013	.96	-.07	.063
Sp.Power	.585	.029	.005	.029	.197	-.242	-.137	.24	-4.96 <sup>4</sup>	.121
Sp.Walk	.018	-.002	.626	.016	.269	.064	-.125	.025	.088	.027
Sp.Fruit	.153	-.213	.505	.123	-.015	-.011	-.387	.003	.171	.323
Conf.Sin	.106	-.032	.977	-.331	-.268	-.45	.133	.071	-.233	-.119
Conf.Fault	1.039	.056	-.162	-.062	.019	.07	.034	-.121	-.109	-.079
Devotion	-.123	.171	.833	-.186	.234	.134	.068	-.06	.02	-.055
Sp.War.	.001	.064	.038	-.017	-.062	.059	.868	-.031	-.043	.075

Appendix 8: Tables of Pearson Product Correlations  
Dependent vrs. Independent Factors

Criteria Variables D1-D8 correlated with all Predictor Variables (ID1-MID6)

	D1	D2	D3	D4	D5	D6	D7	D8
ID1	.102	-.089	-.074	-.037	.154	-.163	-.141	.127
ID2	-.017	-.067	.050	.144	-.123	-.010	.084	.104
ID3	.073	-.206	.006	.016	-.247	.087	-.003	.097
ID4	.108	-.119	.039	-.080	-.031	.043	.044	.183
ID5	-.060	.029	-.121	.083	-.143	-.163	.074	.029
ID6	.007	-.164	.025	.045	.029	-.029	.056	.080
ID7	.070	-.146	-.104	-.077	.083	.107	.047	-.149
ID8	-.207	-.078	-.002	-.075	-.185	-.062	.111	.180
ID9	.086	-.022	.017	-.197	.017	-.072	-.191	.061
ID10	.101	-.005	-.007	-.098	-.044	.138	-.035	-.075
ID11	-.016	.125	-.048	-.013	.029	.169	-.095	-.102
ID12	-.065	-.093	.073	.006	.008	.109	.004	-.019
ID13	.028	.102	-.030	-.058	-.135	-.083	.112	.006
ID14	.014	.151	-.040	-.085	-.027	.117	.051	.011
ID15	-.112	.065	-.041	-.022	-.053	.092	.050	.082
ID16	-.079	.057	-.236	-.135	-.058	.003	.257	.160
ID17	.102	-.100	-.043	.122	.048	-.018	-.230	-.171
ID18	.256	.041	-.000	.089	.066	-.034	-.090	-.143
ID19	.197	-.010	-.016	.104	-.024	.050	-.170	-.042
ID20	.098	.024	-.020	.156	-.085	-.083	.006	-.061
ID21	.148	-.024	-.022	-.148	.246	-.117	-.238	.074
ID22	.040	.190	-.329	.075	-.149	-.247	-.207	-.204
ID23	-.017	-.021	.169	-.002	-.045	-.108	-.149	-.048
ID24	-.013	.172	-.227	.069	-.073	-.150	.037	.155
ID25	.040	.167	.286	.077	.202	.039	-.043	-.147
ID26	.070	-.150	-.021	.046	-.052	-.170	-.014	.093
ID27	-.067	-.109	.031	.070	-.068	.191	.137	.135
ID28	.039	.055	.164	-.007	-.091	-.138	.080	.129
ID29	.206	-.218	.094	.099	-.016	-.023	.053	.164
ID30	.033	.151	-.045	-.001	.145	-.083	.095	-.012
ID31	.121	.025	-.030	-.070	.160	-.004	-.140	.065
ID32	.114	-.089	.183	-.033	-.072	.084	.107	-.000
ID33	.056	.024	.146	-.070	.062	-.077	-.002	-.154
ID34	-.041	.046	.020	-.113	-.080	-.050	.017	.216
ID35	-.131	.040	.132	.249	.008	.087	.031	-.017
ID36	.084	.163	-.178	-.015	-.074	.021	.121	-.062
ID37	-.073	.053	-.043	-.062	-.113	.005	.235	.055
ID38	-.073	.006	.143	.117	-.027	.000	-.060	.093
ID39	.205	.023	-.124	.022	-.012	-.039	-.019	-.080
ID40	-.017	-.120	.002	.170	-.015	-.091	.031	-.024
MID1	.090	-.009	.068	.056	-.031	.144	.059	-.195
MID2	.031	-.141	-.003	.139	.045	-.275	.071	.052
MID3	-.069	-.016	.139	.025	-.037	.327	.082	.013
MID4	-.064	.079	.078	-.305	.155	-.095	-.079	.016
MID5	-.132	.080	.068	-.022	-.154	-.117	.131	.030
MID6	-.023	-.123	.042	.033	.084	-.059	.142	.215



**Pearson Correlations of All Dependent and Independent Variables**  
**Criteria Variables D9-D19 correlated with all Predictor Variables (ID1-MID6)**

	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19
ID1	.107	-.023	-.020	.051	.271	-.200	.044	-.022	.073	-.241	-.033
ID2	-.068	-.040	.228	.190	-.099	.024	-.019	.290	-.031	-.038	-.109
ID3	.068	-.017	-.082	-.160	.088	.023	-.080	.022	-.008	.011	.111
ID4	-.117	.017	.222	-.205	.120	.312	.076	-.060	.062	-.144	.097
ID5	.092	-.047	-.044	.199	.028	-.155	-.117	-.183	.257	.167	-.149
ID6	.086	-.216	-.021	.127	-.008	-.192	-.164	-.051	.124	-.066	-.045
ID7	-.142	-.004	-.019	-.027	-.156	.017	-.041	.007	-.048	-.087	-.057
ID8	-.169	-.217	.255	-.125	.108	-.060	-.061	-.044	-.021	-.109	-.163
ID9	-.068	-.044	.014	.054	-.114	-.112	-.144	-.005	-.031	-.036	-.136
ID10	-.133	.007	.043	-.073	-.115	.085	.098	-.026	-.182	-.131	-.099
ID11	-.172	.058	.034	.112	-.030	-.179	.017	.050	-.095	.146	-.091
ID12	.140	-.041	-.089	.071	.011	-.098	.116	-.066	-.055	-.047	.008
ID13	-.110	.148	-.047	.173	-.388	.117	.111	-.203	.004	.044	.131
ID14	-.132	.038	.081	.121	-.221	.016	.096	-.016	-.091	.062	-.007
ID15	.063	-.138	.091	.052	.016	.038	.074	-.110	.026	-.086	-.029
ID16	.063	-.109	.010	.083	-.061	-.077	-.043	-.070	.025	-.032	-.062
ID17	.096	-.163	-.181	-.104	-.105	.029	-.046	-.105	-.052	.052	-.089
ID18	.017	-.010	.062	.139	-.035	-.005	.097	.126	-.047	.069	-.002
ID19	-.102	.083	.021	-.119	-.056	.188	-.027	.089	-.027	-.058	.083
ID20	.092	-.069	.086	.174	.016	-.030	.093	-.032	.121	.019	.117
ID21	.208	-.111	-.057	.154	.008	-.132	-.193	-.075	.233	.024	-.210
ID22	-.138	.033	-.157	.035	-.066	-.234	-.087	-.153	.014	.123	-.042
ID23	-.091	-.019	.005	.050	-.099	-.062	.090	.083	-.199	.007	-.171
ID24	-.013	.052	.004	.122	-.135	.049	.229	-.047	-.155	.107	.178
ID25	.194	.118	-.097	.065	.052	.037	.130	.077	-.007	-.035	.118
ID26	-.158	.161	.094	.162	-.027	-.029	-.130	.024	.188	.048	-.005
ID27	.173	.129	-.162	.024	.069	.087	.190	-.016	-.066	.159	.109
ID28	.150	.159	-.012	.102	.045	.112	-.056	.069	.195	.010	.076
ID29	.258	.189	-.100	.056	.150	.177	.237	.170	-.039	-.143	.294
ID30	-.028	-.046	.118	-.113	-.007	.272	.092	.167	-.104	-.111	.068
ID31	-.047	.037	.079	.059	.085	-.042	.033	-.085	.096	-.009	.082
ID32	.137	.072	-.003	.094	.025	.050	.087	.074	.099	.059	.090
ID33	.182	-.188	.074	-.101	.199	.034	-.098	-.026	.179	-.106	-.037
ID34	-.073	.167	-.083	.072	-.306	.156	-.009	.033	-.056	-.153	.040
ID35	.099	-.027	.002	.027	-.030	.062	.104	.022	-.080	.251	-.033
ID36	-.047	.053	-.037	-.016	-.090	-.016	-.189	-.008	.092	.082	-.036
ID37	-.087	.030	-.050	-.047	-.045	-.013	.107	.099	-.181	.012	-.112
ID38	-.073	.102	.045	.127	-.078	.051	.084	.040	-.029	-.056	.142
ID39	.106	.108	-.126	.111	-.107	.055	.071	-.057	.014	.116	.097
ID40	-.057	-.067	.199	-.040	.139	.003	-.034	.129	.035	-.165	-.060
MID1	.002	-.047	.114	.006	-.035	.104	.012	.126	-.067	-.026	.205
MID2	.060	.059	.039	.015	.111	.104	-.002	.092	.141	-.115	.204
MID3	.184	.007	-.088	-.029	.054	.054	-.053	-.076	.116	-.032	.099
MID4	.120	-.029	-.149	-.088	.022	-.053	-.145	-.069	.086	-.159	.012
MID5	-.082	.185	-.069	-.052	-.102	.137	.136	-.022	-.156	.036	.048
MID6	.117	.103	.085	.176	.040	.041	.104	.108	.013	-.012	.008

**Pearson Correlations of All Dependent and Independent Variables Con't**  
**Criteria Variables D20-D31 correlated with all Predictor Variables (ID1-MID6)**

	D20	D21	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31
ID1	.083	.036	.182	-.185	.017	-.050	.056	.030	-.008	.000	.145	-.038
ID2	.225	.033	.079	-.091	.165	-.087	.009	.105	-.060	.010	-.021	.124
ID3	-.237	-.027	-.020	-.028	-.100	-.113	.047	-.066	-.129	-.160	.039	.032
ID4	.182	.144	.195	.138	-.041	.015	.029	.162	.002	-.143	.178	.122
ID5	.064	-.112	-.121	-.019	-.008	.153	-.215	.105	-.030	-.133	.120	-.075
ID6	-.094	.205	.016	-.205	.147	-.021	-.064	.017	.112	.131	-.222	.077
ID7	.051	-.065	-.121	.032	-.107	-.055	-.174	.105	.088	-.107	-.055	.034
ID8	.119	-.042	-.052	-.047	-.063	.052	-.045	-.064	.074	-.184	.028	.077
ID9	-.020	.039	-.212	-.068	.006	.103	-.126	-.003	-.142	-.134	.075	-.038
ID10	.079	.068	.153	.087	-.123	-.187	-.028	-.048	.017	-.065	.012	-.054
ID11	-.005	-.150	.079	.110	-.136	.061	-.079	-.079	.206	.079	-.175	-.007
ID12	.097	-.079	.043	-.204	.071	.177	.176	-.158	-.264	-.030	.097	-.128
ID13	-.029	-.095	.067	-.048	.086	-.075	-.023	.027	.197	.101	.078	-.085
ID14	-.039	-.046	-.217	.124	.025	.196	.182	-.047	-.110	.102	-.127	-.028
ID15	-.003	.106	-.077	.033	-.049	.129	-.026	.056	.053	.064	-.052	.008
ID16	.148	.005	-.009	.135	-.037	-.011	-.087	.155	-.005	-.004	.066	-.094
ID17	-.040	-.138	-.086	-.009	-.197	.139	.029	-.155	-.041	.060	.013	-.188
ID18	-.122	.123	-.024	.030	.044	.097	-.022	-.009	.102	-.066	-.091	.247
ID19	-.163	-.002	.117	-.330	-.019	-.156	-.157	-.009	.193	-.175	-.019	.195
ID20	-.062	-.014	.232	.035	-.016	-.130	.084	-.031	.194	.022	-.254	.360
ID21	.166	-.063	-.105	-.147	.146	-.007	.004	-.192	.129	.115	.092	-.206
ID22	-.165	-.326	-.144	-.135	-.169	.094	-.233	-.017	.039	-.075	-.015	-.109
ID23	-.003	-.049	-.021	-.038	-.100	.005	-.009	-.104	.012	-.169	.062	.102
ID24	-.098	.096	.100	.094	-.014	-.020	.024	.092	.059	.093	.037	-.098
ID25	.102	.011	.091	-.017	.186	.183	.277	-.005	-.105	.266	.212	-.191
ID26	.123	-.041	.109	.006	.019	.173	-.052	.152	-.062	.097	.154	-.096
ID27	.053	-.063	.054	-.018	.002	.094	-.019	.143	-.093	-.068	.033	.101
ID28	.204	-.063	.318	-.096	.008	.108	.061	.123	-.006	-.046	.161	.194
ID29	.054	.085	.206	.083	.086	-.095	.127	.036	.074	-.087	.127	.234
ID30	.130	.083	.158	.042	.090	-.019	.125	.165	-.068	.126	.150	-.077
ID31	-.034	.115	.064	.139	-.092	.037	.199	-.124	.072	.308	-.253	-.018
ID32	-.001	.048	.102	.155	-.014	.040	.040	.017	.115	.003	-.030	.217
ID33	-.095	.175	.063	.011	.078	-.064	.128	-.169	.104	.060	-.062	.054
ID34	.150	-.159	-.102	-.116	.183	.009	-.023	.059	-.059	-.035	-.000	.048
ID35	-.058	-.036	.048	-.135	.123	.045	.113	.024	-.203	.027	.068	-.075
ID36	.027	-.078	.148	-.076	.063	-.179	-.096	-.019	.072	-.150	.077	.107
ID37	-.141	.140	.063	.065	-.087	-.201	-.168	.053	.171	-.059	-.099	.119
ID38	.172	-.200	.016	-.159	.075	.147	-.042	.051	.052	-.117	.133	.108
ID39	-.027	.031	-.017	-.062	.031	.134	.003	.100	-.024	.018	.293	-.180
ID40	.197	.078	.098	.141	.069	-.058	.034	.023	.019	-.080	.218	-.012
MID1	-.001	.006	.183	.226	-.255	.010	.074	-.008	.150	-.040	.197	-.071
MID2	.100	-.066	.212	-.262	.272	-.163	.054	-.009	.076	.011	.174	.084
MID3	.074	-.064	.124	-.043	.040	.044	.034	.112	-.079	-.049	.114	-.033
MID4	.086	-.127	-.015	.042	-.005	-.154	-.028	-.147	.136	-.020	.066	-.105
MID5	-.055	-.064	-.017	-.189	.026	-.031	.018	.045	-.138	-.223	.094	.033
MID6	.143	.173	.187	.041	.134	-.157	.150	.116	-.084	.058	.079	.113



**Pearson Correlations of All Dependent and Independent Variables Con't**  
**Correlations of *Missionary Colleague-Rated* Dependent Variables**  
**Against all Predictor Variables (ID1- MID6)**

	MD1	MD2	MD3	MD4
ID1	-.025	-.047	.190	.090
ID2	.045	-.072	.037	-.025
ID3	.107	-.152	.021	-.098
ID4	.194	.088	-.084	.046
ID5	-.107	.006	.064	.129
ID6	.099	-.045	-.048	.130
ID7	-.008	-.160	-.092	-.022
ID8	-.069	.019	.078	-.116
ID9	.159	-.137	-.054	-.152
ID10	-.079	.123	-.004	-.084
ID11	-.002	-.036	-.160	.114
ID12	.004	.132	-.103	.041
ID13	-.027	.135	-.018	-.036
ID14	-.061	.086	.061	.036
ID15	.040	-.072	.111	.016
ID16	.064	-.036	-.063	.077
ID17	-.092	.236	-.082	-.146
ID18	.020	.085	-.165	.072
ID19	.056	-.059	.107	-.084
ID20	-.063	-.014	.026	.188
ID21	-.180	.127	.066	.128
ID22	.030	-.266	.230	-.108
ID23	-.007	.091	.071	.031
ID24	.096	.043	.044	.147
ID25	-.112	.101	.095	.063
ID26	.094	-.164	-.008	.119
ID27	.122	-.057	.097	.147
ID28	.222	-.033	.040	.136
ID29	.094	.102	.104	.064
ID30	.060	.061	.083	.082
ID31	-.154	-.130	-.075	.287
ID32	.126	-.235	-.197	.059
ID33	-.068	-.022	.079	-.093
ID34	-.015	-.008	.200	-.021
ID35	-.033	.172	.011	.076
ID36	-.100	.006	.010	.136
ID37	.139	-.063	-.107	-.152
ID38	.105	.075	.064	-.105
ID39	.028	.183	-.059	.042
ID40	.058	.074	-.000	.024
MID1	.167	.381	-.046	-.017
MID2	-.016	.090	.463	.104
MID3	.124	.050	.194	-.139
MID4	.096	.048	.060	-.139
MID5	-.048	.395	.087	-.037
MID6	.152	.002	.047	.382

Pearson Correlations of All Dependent and Independent Variables Con't  
Correlations of *National-Rated* Dependent Variables (ND1-ND12)  
Against all Predictor Variables (ID1- MID6)

	ND1	ND2	ND3	ND4	ND5	ND6	ND7	ND8	ND9	ND 10	ND 11	ND 12
ID1	.059	.023	-.148	-.007	.166	-.042	-.100	.085	.047	-.171	-.114	.134
ID2	-.239	.184	-.036	-.054	-.103	.150	-.168	.129	-.026	-.029	.063	-.122
ID3	.034	-.235	.007	-.013	-.068	.102	.091	.042	.143	-.094	-.175	.016
ID4	-.059	-.022	.075	-.004	-.158	.078	.001	-.016	.127	-.075	.088	.016
ID5	.131	-.148	.054	-.094	.007	.063	.046	.068	.293	-.279	-.064	-.016
ID6	.107	-.144	.154	.272	.072	.061	-.130	-.007	-.079	-.150	.062	-.117
ID7	-.088	.032	.097	.016	-.077	-.084	-.041	.081	-.088	-.107	.022	.100
ID8	.105	-.034	.120	.147	.103	.096	-.086	.006	-.178	-.046	.107	-.023
ID9	-.247	.216	.001	.012	.100	-.072	.069	-.096	-.271	-.046	.143	.084
ID10	-.074	-.042	.062	.159	.154	-.133	.116	-.280	-.022	-.047	-.026	-.015
ID11	.147	.049	-.168	-.101	.043	.124	.087	-.070	-.151	.225	-.023	.117
ID12	.047	-.105	-.006	.200	.119	-.072	-.019	-.028	-.246	-.262	-.098	.147
ID13	-.007	.005	.127	-.021	.147	.077	-.267	.140	-.062	.032	.025	-.003
ID14	.057	-.054	-.040	-.051	.012	.151	.213	-.235	-.093	.081	.023	.272
ID15	-.038	-.207	-.008	-.245	.130	.013	.153	-.019	-.039	-.034	-.149	.179
ID16	-.086	-.016	.001	-.087	.027	.050	.006	.075	.183	-.057	-.139	-.100
ID17	-.110	.046	-.035	.115	-.232	.055	-.125	.144	-.157	.070	-.053	-.185
ID18	.061	.015	-.102	-.085	-.037	.051	-.114	.079	-.052	.232	.039	-.082
ID19	-.046	-.096	-.139	.092	-.050	-.153	-.035	-.165	-.005	.161	.053	-.150
ID20	-.039	-.102	.118	-.059	-.057	-.063	-.136	.217	.082	.194	-.209	-.049
ID21	.349	.126	-.373	-.069	.242	-.063	-.059	.018	.142	-.134	-.096	.199
ID22	-.070	-.070	.131	-.082	-.089	-.021	.158	.084	-.065	.009	-.019	.147
ID23	.050	.146	-.120	.053	-.002	.062	-.105	-.155	.078	.065	.205	-.105
ID24	.042	-.022	-.013	.003	.046	-.067	.056	-.043	.161	.142	-.040	.057
ID25	.209	.029	-.043	.037	-.041	.189	.059	.023	.305	-.215	-.044	.079
ID26	-.248	.138	.208	-.055	-.064	.048	-.147	.216	-.139	.061	.082	-.163
ID27	.220	-.033	.030	.061	.028	.117	.177	.064	.157	-.188	-.130	-.017
ID28	.121	.007	-.076	.100	-.176	.079	-.120	.124	.308	-.060	.049	-.024
ID29	.130	.067	.078	.086	.123	-.025	-.070	.113	.148	-.093	-.071	-.097
ID30	-.056	.090	.022	-.054	-.035	.127	-.115	.011	.187	.097	.025	-.037
ID31	-.006	-.115	-.021	-.088	.009	.127	.166	-.258	.051	.129	.004	.036
ID32	.076	.038	.045	-.092	-.044	.190	.043	.160	.005	-.035	-.050	.080
ID33	.156	-.171	.066	-.137	.021	-.154	.105	.140	.097	-.114	-.021	-.092
ID34	-.168	.210	.010	.141	.144	.298	-.242	-.071	-.227	.005	.023	.027
ID35	.269	-.058	-.247	.095	-.117	.193	.036	-.097	.373	-.077	-.011	-.159
ID36	.163	-.090	.047	.195	-.097	-.013	-.129	-.159	.076	.042	.059	.164
ID37	-.209	-.109	.060	-.021	-.034	.036	-.129	-.170	-.010	.177	.094	-.044
ID38	-.176	.145	.025	.035	-.205	.028	-.125	.235	.086	.128	-.118	-.038
ID39	-.088	.219	.037	.081	.129	-.218	-.160	.117	-.009	-.027	-.085	.135
ID40	.152	-.126	-.073	.039	-.128	-.095	-.014	.072	-.002	-.100	-.006	.145
MID1	.039	-.172	-.068	.071	-.028	-.083	.185	-.252	.026	.062	.017	-.056
MID2	-.101	-.143	.046	.035	-.058	.134	-.230	-.043	.163	-.118	.014	-.032
MID3	.212	-.224	.073	.091	-.147	.099	.103	.111	.292	-.050	-.162	.111
MID4	.077	.061	.032	-.121	.144	-.079	.047	-.073	-.041	.185	.125	.052
MID5	-.150	.023	-.012	-.046	.121	-.195	-.039	-.132	-.094	-.004	.173	-.105
MID6	.113	.136	-.031	-.006	.308	.011	-.132	-.019	-.002	-.078	.057	.062



Appendix 9: Multiple Regression Summary  
All Predictor (Independent) Factors  
with Criterion (Dependent) Factors (D1-15)

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15
ID1													.271	-.200	
ID2											.228				
ID3		-.206			-.247										
ID4								.183			.222	-.205		.312	
ID5					-.143										
ID6										-.216				-.192	
ID7													-.156		
ID8	-.207									-.217	.255				
ID9							-.191								
ID10															
ID11															
ID12															
ID13													-.388		
ID14															
ID15															
ID16			-.236				.257								
ID17							-.230				-.181				
ID18	.256														
ID19							-.170							.188	
ID20				.156								.174			
ID21					.246		-.238								-.193
ID22			-.329			-.247	-.207								
ID23															
ID24		.172													.229
ID25		.167	.286		.202										
ID26									-.158			.162			-.130
ID27											-.162				
ID28									.150						
ID29	.206	-.218							.258					.177	.237
ID30														.272	
ID31							-.140								
ID32															
ID33															
ID34								.216		.167			-.306		
ID35				.249											
ID36															-.189
ID37							.235								
ID38															
ID39															
ID40				.170											
MID1								-.195							
MID2						-.275									
MID3						.327									
MID4				-.305											
MID5															
MID6								.215							
R <sup>2</sup>	.153	.179	.252	.221	.201	.239	.386	.185	.132	.130	.232	.125	.305	.310	.248
F	5.23	4.68	9.75	6.09	5.40	9.12	6.45	4.87	4.41	4.34	5.14	4.13	9.44	6.28	5.60

NOTES: Correlations reported in the main body of this table are simple Pearson coefficients (r).  
n = 91.

**Summary of Multiple Regression Con't**  
**All Independent Factors with Dependent Factors (D16-MD1)**

	D16	D17	D18	D19	D20	D21	D22	D23	D24	D26	D28	D29	D30	D31	MD1
ID1			-.241					-.185							
ID2	.290				.225										
ID3					-.237										
ID4					.182										
ID5		.257													
ID6								-.205							
ID7															
ID8				-.163											
ID9							-.212								
ID10															
ID11											.206				
ID12								-.204			-.264				
ID13	-.203			.131											
ID14							-.217								
ID15															
ID16															
ID17									-.197					-.188	
ID18														.247	
ID19								-.330			.193				
ID20													-.254	.360	
ID21				-.210	.166										
ID22						-.326			-.169	-.233					
ID23		-.199										-.169			
ID24		-.155													
ID25									.186	.277		.266			
ID26															
ID27		-.066													
ID28		.195					.318								.222
ID29				.294				.083							
ID30	.167														
ID31				.082						.199		.308			
ID32															
ID33															
ID34									.183						
ID35			.251												
ID36															
ID37				-.112											
ID38												-.117			
ID39													.293		
ID40															
MID1							.183	.226	-.255				.174		
MID2								-.262	.272						
MID3					.074										
MID4															
MID5															
MID6							.187								
R <sup>2</sup>	.164	.254	.063	.267	.233	.106	.280	.403	.291	.192	.150	.280	.192	.209	.049
F	5.68	5.79	5.99	5.11	5.15	10.56	6.62	8.00	5.75	6.91	5.12	8.35	6.87	7.67	4.59

NOTES: Correlations reported in the main body of this table are simple Pearson coefficients (r).  
n = 91.



Summary of Multiple Regression Con't  
All Independent Factors with Dependent Factors (MD2-ND12)

	MD2	MD3	MD4	ND1	ND2	ND3	ND4	ND5	ND6	ND7	ND8	ND9	ND 10	ND 12
ID1														
ID2														
ID3					-.235									
ID4														
ID5												.293	-.279	
ID6							.272							
ID7													-.107	
ID8														
ID9			-.152									-.271		
ID10											-.280			
ID11														
ID12					-.105							-.246	-.262	
ID13										-.267				
ID14														.272
ID15							-.245							
ID16												.183		
ID17								-.232						-.185
ID18														
ID19												-.005		
ID20											.217			
ID21	.127			.349		-.373								.199
ID22	-.266	.230												
ID23														
ID24														
ID25												.305	-.215	
ID26				-.248										
ID27														
ID28								-.176						
ID29					.067									
ID30														
ID31			.287		-.115						-.258			
ID32														
ID33					-.171									
ID34		.200							.298					
ID35						-.247			.193					-.159
ID36														.164
ID37			-.152											
ID38														
ID39														
ID40				.152	-.126									
MID1	.381				-.172						-.252			
MID2		.463			-.143					-.230				
MID3		.194		.212										
MID4														
MID5	.395								-.195					
MID6			.382					.308						
R <sup>2</sup>	.383	.334	.301	.278	.367	.186	.138	.195	.230	.130	.255	.426	.185	.259
F	13.35	10.77	9.26	6.54	4.64	7.98	5.62	5.56	5.87	5.22	5.82	8.18	5.98	4.69

NOTES: Correlations reported in the body of this table are simple Pearson coefficients (r).  
n = 91 for MD2-4; n = 83 for ND1-ND12.

Appendix 10: Specific Educational Content--Value and Current Need<sup>1</sup>

Accounting						Administration						Anthropology					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	9	17	Non=	15	19	Non=	8	15	Non=	12	15	Non=	11	17	Non=	26	34
Som=	17	32	Som=	29	36	Som=	10	19	Som=	16	21	Som=	16	25	Som=	25	33
Mod=	15	28	Mod=	21	26	Mod=	20	37	Mod=	37	47	Mod=	21	33	Mod=	17	22
Mch=	12	23	Hgh=	15	19	Mch=	16	30	Hgh=	13	17	Mch=	16	25	Hgh=	8	11
N=	53		N=	80		N=	54		N=	78		N=	64		N=	76	

Apologetics						Christian Education						Church Development					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	6	10	Non=	15	21	Non=	3	4	Non=	8	10	Non=	4	6	Non=	7	9
Som=	19	31	Som=	17	24	Som=	7	9	Som=	21	26	Som=	12	17	Som=	15	20
Mod=	22	36	Mod=	22	31	Mod=	27	35	Mod=	19	23	Mod=	23	33	Mod=	18	23
Mch=	15	24	Hgh=	18	25	Mch=	41	53	Hgh=	34	42	Mch=	30	44	Hgh=	37	48
N=	62		N=	72		N=	78		N=	82		N=	69		N=	77	

Church Growth						Church Management						Church Planting					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	3	4	Non=	8	10	Non=	5	8	Non=	10	13	Non=	3	4	Non=	5	6
Som=	10	15	Som=	16	20	Som=	13	21	Som=	19	25	Som=	9	13	Som=	10	13
Mod=	22	32	Mod=	14	18	Mod=	23	38	Mod=	22	29	Mod=	18	27	Mod=	17	22
Mch=	33	49	Hgh=	41	52	Mch=	20	33	Hgh=	25	33	Mch=	38	56	Hgh=	45	58
N=	68		N=	79		N=	61		N=	76		N=	68		N=	77	

Community Entry						Conflict Management						Contextualization					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	2	4	Non=	16	22	Non=	7	13	Non=	12	16	Non=	6	13	Non=	13	20
Som=	13	25	Som=	15	20	Som=	6	11	Som=	16	22	Som=	13	28	Som=	16	25
Mod=	18	35	Mod=	22	30	Mod=	18	33	Mod=	18	25	Mod=	15	32	Mod=	19	30
Mch=	19	37	Hgh=	21	28	Mch=	24	44	Hgh=	27	37	Mch=	13	28	Hgh=	16	25
N=	52		N=	74		N=	55		N=	73		N=	47		N=	64	

Cross-Cultural Communication						Cross-Cultural Counseling						Cross-Cultural Evangelism					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	2	3	Non=	5	6	Non=	6	12	Non=	11	15	Non=	2	3	Non=	6	7
Som=	8	10	Som=	20	24	Som=	8	16	Som=	16	21	Som=	9	13	Som=	14	17
Mod=	15	20	Mod=	13	16	Mod=	12	25	Mod=	17	23	Mod=	22	33	Mod=	19	24
Mch=	52	68	Hgh=	46	55	Mch=	23	47	Hgh=	31	41	Mch=	34	51	Hgh=	42	52
N=	77		N=	84		N=	49		N=	75		N=	67		N=	81	

<sup>1</sup>This appendix looks specifically at how subjects viewed the value of training received at any time (formal academics and formal or nonformal pre-field, on-field, and/or furlough training offered by missions or mission-associated agencies) as well as the current felt-need of further training in that subject area. "N" stands for the number of subjects answering the question. It is always less under "value" than under "need" because not all individuals had training in that area. Total subject pool is 91. "Non"= "None;" "Som"= "Some;" "Mod"= "Moderate;" "Mch"= "Much;" and "Hgh"= "High."



Cross-Cultural Psychology						Culture and Change						Culture Shock/StressManage.					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	8	19	Non=	14	19	Non=	1	2	Non=	10	13	Non=	5	7	Non=	13	15
Som=	9	21	Som=	24	32	Som=	13	19	Som=	22	28	Som=	10	14	Som=	16	19
Mod=	11	26	Mod=	20	27	Mod=	21	31	Mod=	14	18	Mod=	23	31	Mod=	22	26
Mch=	15	35	Hgh=	16	22	Mch=	32	48	Hgh=	32	41	Mch=	36	49	Hgh=	34	40
N=	43		N=	74		N=	67		N=	78		N=	74		N=	85	

Ethnographic Skills						Decision-Making Skills						Demographic Study Skills					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	7	15	Non=	15	22	Non=	2	4	Non=	7	9	Non=	15	46	Non=	25	38
Som=	8	17	Som=	24	25	Som=	8	14	Som=	18	23	Som=	5	15	Som=	22	33
Mod=	15	31	Mod=	16	23	Mod=	24	42	Mod=	29	37	Mod=	8	24	Mod=	13	20
Mch=	18	38	Hgh=	14	20	Mch=	23	40	Hgh=	24	31	Mch=	5	15	Hgh=	6	9
N=	48		N=	69		N=	57		N=	78		N=	33		N=	66	

Ecumenics						Family Life						Field Language Learning					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	15	41	Non=	30	46	Non=	6	8	Non=	6	8	Non=	5	6	Non=	9	11
Som=	8	22	Som=	23	35	Som=	19	26	Som=	17	22	Som=	14	18	Som=	20	23
Mod=	10	27	Mod=	9	14	Mod=	49	66	Mod=	19	24	Mod=	59	76	Mod=	13	15
Mch=	4	11	Hgh=	4	6	Mch=	0	0	Hgh=	36	46	Mch=	0	0	Hgh=	44	51
N=	37		N=	66		N=	74		N=	78		N=	78		N=	86	

Field Logistics						Financial Management						Health Maintenance/Medicine					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	4	6	Non=	21	27	Non=	2	3	Non=	10	13	Non=	6	9	Non=	14	17
Som=	7	11	Som=	20	25	Som=	9	15	Som=	24	31	Som=	10	16	Som=	26	32
Mod=	27	41	Mod=	20	25	Mod=	21	36	Mod=	22	28	Mod=	24	37	Mod=	17	21
Mch=	28	42	Hgh=	18	23	Mch=	27	46	Hgh=	22	28	Mch=	24	37	Hgh=	24	30
N=	66		N=	79		N=	59		N=	78		N=	64		N=	81	

Group Communication Skills						Identify/Develop New Ministry						Innovation					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	4	7	Non=	8	10	Non=	2	4	Non=	7	9	Non=	6	12	Non=	9	13
Som=	6	11	Som=	14	18	Som=	14	28	Som=	22	28	Som=	11	22	Som=	16	23
Mod=	20	36	Mod=	26	33	Mod=	21	42	Mod=	22	28	Mod=	19	39	Mod=	19	27
Mch=	25	45	Hgh=	30	39	Mch=	13	26	Hgh=	27	35	Mch=	13	27	Hgh=	26	37
N=	56		N=	78		N=	50		N=	78		N=	49		N=	70	

Interpersonal Communication						Justice and Ministry						Evangelistic Bible Studies					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	3	4	Non=	7	8	Non=	10	26	Non=	19	27	Non=	9	15	Non=	7	9
Som=	10	14	Som=	15	17	Som=	12	32	Som=	26	37	Som=	23	37	Som=	14	17
Mod=	25	36	Mod=	25	29	Mod=	12	32	Mod=	18	25	Mod=	28	45	Mod=	23	28
Mch=	32	46	Hgh=	38	45	Mch=	4	11	Hgh=	8	11	Mch=	2	3	Hgh=	38	46
N=	70		N=	85		N=	38		N=	71		N=	62		N=	82	

<i>Linguistic/Kinesic Analysis</i>						<i>Personal Spiritual Dynamics</i>						<i>Support Maintenance</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	15	34	Non=	16	22	Non=	5	7	Non=	2	3	Non=	3	5	Non=	6	8
Som=	9	21	Som=	24	32	Som=	25	33	Som=	11	14	Som=	7	12	Som=	21	27
Mod=	7	16	Mod=	19	26	Mod=	44	57	Mod=	21	26	Mod=	24	40	Mod=	25	32
Mch=	13	30	Hgh=	15	20	Mch=	3	4	Hgh=	46	58	Mch=	26	43	Hgh=	26	33
N=	44		N=	74		N=	77		N=	80		N=	60		N=	78	

<i>Ministry Assess. &amp; Evaluation</i>						<i>Ministry Ethics</i>						<i>Missiological Trends</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	4	8	Non=	8	11	Non=	5	11	Non=	12	16	Non=	5	9	Non=	16	21
Som=	11	22	Som=	23	30	Som=	6	13	Som=	18	24	Som=	16	30	Som=	27	35
Mod=	16	32	Mod=	22	29	Mod=	17	36	Mod=	22	29	Mod=	25	46	Mod=	26	34
Mch=	19	38	Hgh=	23	30	Mch=	19	40	Hgh=	23	31	Mch=	8	15	Hgh=	8	10
N=	50		N=	76		N=	47		N=	75		N=	54		N=	77	

<i>Mission Policy/Principles</i>						<i>Nat. Church Leader Development</i>						<i>Church-Mission Relationships</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	1	1	Non=	16	19	Non=	3	5	Non=	6	8	Non=	1	2	Non=	7	9
Som=	13	17	Som=	21	25	Som=	8	13	Som=	10	13	Som=	10	17	Som=	12	15
Mod=	37	49	Mod=	27	33	Mod=	21	34	Mod=	23	30	Mod=	22	38	Mod=	27	35
Mch=	25	33	Hgh=	19	23	Mch=	29	48	Hgh=	39	50	Mch=	25	43	Hgh=	32	41
N=	76		N=	83		N=	61		N=	78		N=	58		N=	78	

<i>Non-verbal Communication Sk.</i>						<i>Pastoral Ministry</i>						<i>Personal Maintenance Skills</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	6	11	Non=	12	16	Non=	3	5	Non=	11	15	Non=	1	1	Non=	5	6
Som=	10	18	Som=	23	31	Som=	7	12	Som=	13	18	Som=	10	14	Som=	14	17
Mod=	24	43	Mod=	20	27	Mod=	20	33	Mod=	20	27	Mod=	19	26	Mod=	27	33
Mch=	16	29	Hgh=	20	27	Mch=	30	50	Hgh=	30	41	Mch=	42	58	Hgh=	36	44
N=	56		N=	75		N=	60		N=	74		N=	72		N=	82	

<i>Philosophy</i>						<i>Political Science</i>						<i>National Church &amp; Suffering</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	10	18	Non=	29	40	Non=	15	38	Non=	32	45	Non=	9	27	Non=	18	25
Som=	25	45	Som=	20	28	Som=	15	38	Som=	29	41	Som=	11	32	Som=	28	39
Mod=	13	23	Mod=	14	19	Mod=	7	18	Mod=	7	10	Mod=	7	21	Mod=	18	25
Mch=	8	14	Hgh=	9	13	Mch=	3	8	Hgh=	3	4	Mch=	7	21	Hgh=	7	10
N=	56		N=	72		N=	40		N=	71		N=	34		N=	71	

<i>Problem-solving Skills</i>						<i>Psychology</i>						<i>Radical Theologies</i>					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	3	5	Non=	7	9	Non=	11	16	Non=	16	21	Non=	6	13	Non=	15	20
Som=	9	15	Som=	20	25	Som=	12	18	Som=	22	29	Som=	12	26	Som=	20	27
Mod=	29	48	Mod=	31	39	Mod=	36	54	Mod=	30	39	Mod=	19	40	Mod=	38	38
Mch=	20	33	Hgh=	22	28	Mch=	8	12	Hgh=	9	12	Mch=	10	21	Hgh=	11	15
N=	61		N=	80		N=	67		N=	77		N=	47		N=	74	



Relating to Political Authorities						Relating to Poverty						Role of Holy Spirit					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	10	26	Non=	11	15	Non=	7	20	Non=	11	15	Non=	6	7	Non=	5	6
Som=	14	36	Som=	34	47	Som=	10	29	Som=	21	29	Som=	23	27	Som=	13	16
Mod=	8	21	Mod=	18	25	Mod=	11	31	Mod=	22	30	Mod=	55	66	Mod=	16	19
Mch=	7	18	Hgh=	9	13	Mch=	7	20	Hgh=	19	26	Mch=	0	0	Hgh=	50	60
N=	39		N=	72		N=	35		N=	73		N=	84		N=	84	

Sociological Study Skills						Sociology and Ministry						Translation Theory & Method					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	7	17	Non=	16	22	Non=	10	22	Non=	19	25	Non=	11	22	Non=	17	22
Som=	17	42	Som=	32	44	Som=	14	31	Som=	28	37	Som=	8	16	Som=	25	33
Mod=	11	27	Mod=	16	22	Mod=	16	36	Mod=	19	25	Mod=	14	28	Mod=	17	22
Mch=	6	15	Hgh=	9	12	Mch=	5	11	Hgh=	9	12	Mch=	17	34	Hgh=	18	23
N=	41		N=	73		N=	45		N=	75		N=	50		N=	77	

Spiritual Gifts						Spiritual Warfare						Stress Management					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	1	1	Non=	9	11	Non=	2	3	Non=	4	5	Non=	3	5	Non=	6	7
Som=	7	8	Som=	15	18	Som=	5	7	Som=	9	11	Som=	10	16	Som=	20	24
Mod=	32	38	Mod=	24	28	Mod=	24	31	Mod=	24	29	Mod=	22	34	Mod=	23	27
Mch=	43	52	Hgh=	37	44	Mch=	46	60	Hgh=	46	55	Mch=	29	45	Hgh=	35	42
N=	83		N=	85		N=	77		N=	83		N=	64		N=	84	

Study of Target Culture						Study of Target Religion						Systematic & Biblical Theology					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	5	10	Non=	12	16	Non=	6	11	Non=	12	17	Non=	5	7	Non=	10	12
Som=	5	10	Som=	18	24	Som=	9	16	Som=	14	19	Som=	24	32	Som=	19	23
Mod=	18	35	Mod=	21	28	Mod=	16	29	Mod=	24	33	Mod=	47	62	Mod=	21	26
Mch=	24	46	Hgh=	24	32	Mch=	24	44	Hgh=	22	31	Mch=	0	0	Hgh=	32	39
N=	52		N=	75		N=	55		N=	72		N=	76		N=	82	

Discipling New Believers						Theology of Mission						Cultural Values/Worldview					
Value			Need			Value			Need			Value			Need		
Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%	Value	#	%
Non=	7	9	Non=	4	5	Non=	5	7	Non=	17	22	Non=	3	5	Non=	5	6
Som=	26	35	Som=	12	15	Som=	9	13	Som=	22	28	Som=	12	19	Som=	27	33
Mod=	42	56	Mod=	21	26	Mod=	28	41	Mod=	21	27	Mod=	18	28	Mod=	25	31
Mch=	0	0	Hgh=	45	55	Mch=	27	39	Hgh=	19	24	Mch=	32	49	Hgh=	24	30
N=	75		N=	82		N=	69		N=	79		N=	65		N=	81	

Women's Role - Ministry					
Value			Need		
Value	#	%	Value	#	%
Non=	6	9	Non=	12	15
Som=	8	12	Som=	24	29
Mod=	29	43	Mod=	25	31
Mch=	25	37	Hgh=	21	26
N=	68		N=	82	